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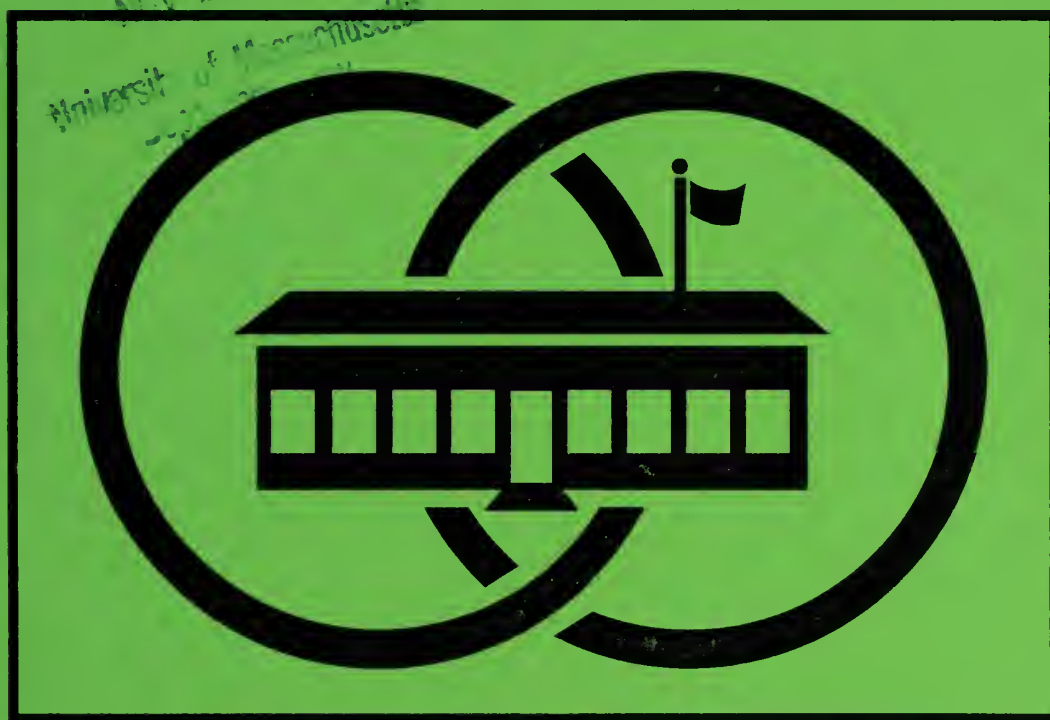
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The Comprehensive SCHOOL HEALTH MANUAL



Massachusetts Department of Public Health

Published by: William Francis Galvin, Secretary of the Commonwealth

\$ 44.65



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January 1995

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Dear Coordinator/Manager of the School Health Program,

We'd like to get your feedback! Goodman Research Group, Inc. is working with the Massachusetts Department of Public Health to assess the usefulness of this manual to your work. **Your response is extremely important in helping DPH determine the effectiveness of its work on school health issues.** Please fill out this survey within a few weeks of receiving it. After you've filled it out, fold it so our return address is showing, and drop it in the nearest mailbox. No postage is necessary. DO NOT USE STAPLES TO SEAL IT (use tape). Many thanks for your time and help!

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- ☐ administrators
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- ☐ school health aide/assistant
- ☐ school-based health center staff
- ☐ pupil personnel services
- ☐ support staff (secretaries, food service staff...)
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- ☐ as a tool for increasing public awareness of health issues
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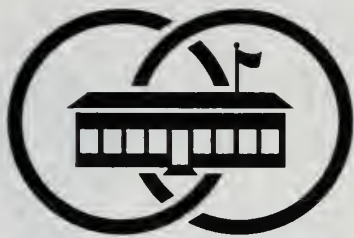
	Not At All Useful			Extremely Useful		
Overall usefulness	1	2	3	4	5	
Resources at the end of each chapter	1	2	3	4	5	
References at the end of each chapter	1	2	3	4	5	
Exhibits at end of some chapters	1	2	3	4	5	
The index	1	2	3	4	5	

The individual chapters:

1. New Challenges and New Opportunities	1	2	3	4	5	
2. Developing an Effective School Health Program	1	2	3	4	5	
3. School Health Curriculum	1	2	3	4	5	
4. Safe and Healthful Environment	1	2	3	4	5	
5. Health Assessment	1	2	3	4	5	
6. Nurse Practice in School Setting	1	2	3	4	5	
7. Children w/ Special Health Care Needs	1	2	3	4	5	
8. Infectious Disease Control	1	2	3	4	5	
9. Nutritional Health	1	2	3	4	5	
10. Physical Fitness and Sports	1	2	3	4	5	
11. Mental Health	1	2	3	4	5	
12. Sex Education & Reproductive Health	1	2	3	4	5	
13. Injury and Violence Prevention	1	2	3	4	5	
14. Substance Abuse Prevention	1	2	3	4	5	
15. Oral Health	1	2	3	4	5	
16. Refugee and Immigrant Health Care	1	2	3	4	5	

9. Rate each of the following statements about the SHM. (Circle only one response for each)

	Strongly Disagree			Strongly Agree		
The manual is easy to use.	1	2	3	4	5	
The chapters are of appropriate length and depth.	1	2	3	4	5	
The chapters are well-organized.	1	2	3	4	5	
The information presented is clear.	1	2	3	4	5	



The Comprehensive School Health Manual

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Spring 1995

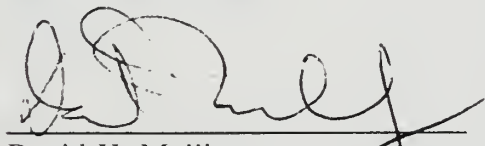
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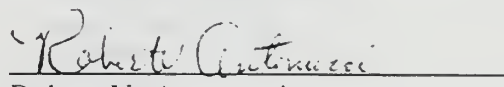
We are pleased to present **The Comprehensive School Health Manual** which encompasses current, practical health information and resources for students and staff in the Commonwealth's schools. The manual is a timely publication, representing leadership by the Department of Public Health and collaboration with the Department of Education. We are working together to promote the concept that a child's health and education are integrally related.

This manual is designed for use by school administrators, school nurses and other health personnel, teachers, and the many others who are working to develop comprehensive school health programs that encompass health education, health and human services, and a healthful environment. The manual can be used as you design and implement your school's comprehensive health program. Its uses include increasing awareness of school health issues, providing guidelines for acceptable practice and policy development, and orienting new school personnel.

To ensure that the manual is used effectively, you may choose to provide your staff with an orientation to its contents, ensure that all personnel know where the manual is located, and regularly reinforce its concepts of a comprehensive program. Staff of the Department of Public Health and the Department of Education are available to provide additional assistance at your request. We very much respect and appreciate your continuing leadership efforts to make all Massachusetts schools safe and healthy environments for learning and teaching.

Sincerely,


David H. Mulligan
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[The text in this section is extremely faint and illegible. It appears to be a list or index of items, possibly names of people or places, arranged in columns.]





ACKNOWLEDGMENTS

This Comprehensive School Health Manual was partially supported by the Bureau of Maternal and Child Health, U.S. Department of Health and Human Services. The manual involved the extensive efforts, expertise, advice, and substantive writing and reviewing of various sections and chapters by many individuals both in the Department of Public Health and elsewhere. We offer them our heartfelt thanks for their help in completing this manual.

We wish to especially acknowledge Department of Public Health administrators – Deborah Klein Walker, Assistant Commissioner, Bureau of Family and Community Health, and Linda Jo Doctor, Director, Division of Prevention, for comments and help in processing the manual to completion.

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THE SCHOOL'S ROLE IN CHILD AND ADOLESCENT HEALTH

The school setting offers unique opportunities for children and adolescents to learn healthy behaviors through education and to receive easily accessible health services. As the linkage between education and health is increasingly recognized, the need for guidelines for comprehensive school health programs is also recognized. Section I describes the three general components of school health: health education, health services, and a healthy school environment. It begins with a historical and policy perspective; school health programs are not a new phenomenon but are developing and changing to meet ongoing and emerging health needs of young people. This section emphasizes the need for flexibility in program design; schools are encouraged to develop comprehensive programs that meet the needs of their specific students and staff. It also emphasizes the school as an integral part of the community, whose participation is necessary for the development of an effective comprehensive school health program and whose health and human services should be linked to the school program.

Chapter 1:

Challenges and Opportunities in School Health gives a national and historical context for the role of school health as it relates to the education of children and adolescents. From an initial focus on communicable disease management, school health programs have had to address the changing societal issues affecting the health of young people, including the increase in social morbidities. The chapter describes the rationale for comprehensive school health and education programs from pre-kindergarten to twelfth grade, suggested models for understanding and developing comprehensive programs, the need for sound policy development, and new directions for school health.

Chapter 2:

Developing an Effective School Health Program gives administrative guidance to schools in developing their comprehensive school health programs with a particular focus on the school health service program and how it relates to health education and other human service programs in the educational setting. Emphasis is on a student health needs assessment, a school health advisory committee, the need for well-qualified personnel with clear role definitions, interdisciplinary collaboration, a foundation of sound policies, and program evaluation. This chapter contains a large number of sample forms, position descriptions, and policies to assist the schools in developing their own programs.

Chapter 3:

School Health Curriculum identifies sound principles for health education pre-kindergarten to twelfth grade. It describes the content of a comprehensive school health curriculum and provides guidance for selecting and implementing the curriculum. An underlying principle is that the health education program and health services must be interrelated: the content the student learns in a classroom should be reinforced in the service setting and the rest of the school environment.

Chapter 4:

Safe and Healthful Environment recognizes that the school's physical, social, and emotional environment can affect both the health and education of the students and staff. Because the social and emotional aspects are addressed in other chapters, this chapter emphasizes the physical environment, bringing together information on such issues as space, air quality, and cleanliness with related standards and regulations. The numerous government agencies with responsibilities for the various aspects of school environment are identified.

Introduction

The purpose of this document is to provide a comprehensive overview of the project's objectives, scope, and deliverables. This section will outline the key goals and the expected outcomes of the project. The project is designed to address the current challenges and opportunities in the market, and to provide a clear roadmap for the future.

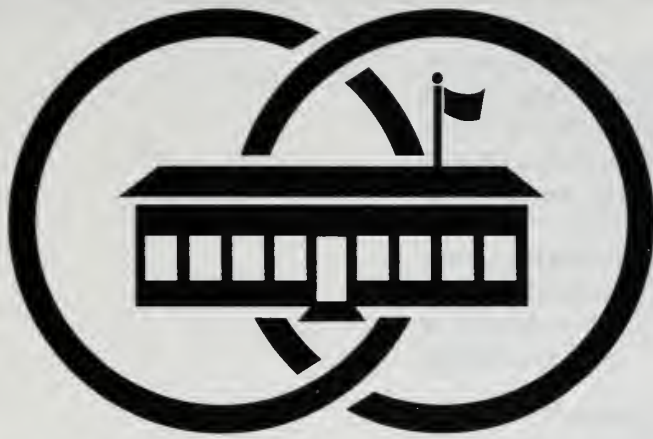
The project is organized into several phases, each with its own set of tasks and milestones. The first phase is the initial planning and research, which will involve gathering data and identifying the key areas of focus. The second phase is the development and implementation of the project plan, which will involve creating a detailed schedule and allocating resources.

The third phase is the execution and monitoring of the project, which will involve implementing the plan and tracking progress. The fourth phase is the evaluation and reporting, which will involve assessing the results and providing a final report. The project is expected to be completed by the end of the year, and the results will be presented to the stakeholders.

The project is a complex and challenging task, but it is also an opportunity to learn and grow. The team is committed to working hard and achieving the best possible results. The project will be a testament to the team's dedication and hard work.

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Introduction

Purpose of This Manual

Who Should Use This Manual

How to Use This Manual

Updating the Manual



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From the University of Chicago

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An increasing recognition of the relationship between students' health status and their ability to learn has stimulated the development of comprehensive health education programs and a range of health and human services in the school setting. Such programs and services have had to respond rapidly to the health challenges of today's students: students with special health care needs, students with no health insurance or access to primary care, changing family structure and support systems, and higher prevalence of morbidities such as violence, teen pregnancy, and sexually transmitted disease.

In order to assist schools in designing health programs, the Massachusetts Department of Public Health (MDPH), in collaboration with the Massachusetts Department of Education (MDOE), has led the effort to develop this comprehensive manual on school health. It provides up-to-date practical health information and resources adapted to the needs of Massachusetts schools. Its target audience includes school administrators, school nurses and other health personnel, teachers, parents, and many others who strive to promote the health of children and adolescents by developing comprehensive school health programs that are based on prevention and are responsive to the health issues of children, adolescents and their families.

The development of this manual follows the commitment of the Massachusetts Department of Public Health to enhancing school health programs. This commitment is articulated in its mission statement:

The Massachusetts Department of Public Health (MDPH) promotes and assures conditions that improve and protect Massachusetts residents. MDPH focuses on community-based approaches, fosters continuous improvements in the health status of individuals and communities, supports programs which prevent and treat disease and disability, and intervenes to reduce threats to the public's health. MDPH's focus includes the health status of all Massachusetts residents and communities, with particular emphasis on those at highest risk and greatest need.

PURPOSE OF THIS MANUAL

This manual is a comprehensive resource book with basic information, guidelines, and recommendations. It reflects the expanding role of students' health, changes in diseases and prevention of disease, and the growing emphasis for both children and adults on wellness and health promotion. This book seeks to:

- Increase public awareness of health issues affecting the Commonwealth's children and adolescents and the need to develop strategies to address those issues in the school setting.
- Provide guidelines for primary prevention.



- Serve as a guide for appropriate and acceptable practice on issues relating to the health of students.
- Reflect the responsibility of all school personnel in health promotion.
- Provide a guide for the formulation of local school health policies and programs.
- Serve as a tool for orienting new school personnel.

WHO SHOULD USE THIS MANUAL

The success of a school health program depends, in large part, on good administrative structure and leadership, with assistance from a variety of other key individuals within the school and the community. School administrators are ultimately responsible for the success of the school health program, but a team approach is most effective. A typical team includes, but is not limited to, the school nurse, principal, and other administrators, school physician, health educator, student support service staff, and classroom teachers. This manual is designed to enhance the understanding of health issues for the following individuals:

- School health services personnel such as nurses, nurse practitioners, physicians, school-based health center staff, school health aides, and health educators.
- Superintendents, assistant superintendents, principals, vice principals, and unit directors.
- Pupil personnel services staff such as guidance counselors, adjustment counselors, school psychologists, and other mental health professionals.
- Teachers and classroom aides.
- Support staff such as secretaries, aides, custodians, and food service staff.
- Parents and parent advocates.
- Students, when and where appropriate.

HOW TO USE THIS MANUAL

The MDPH recommends that this manual be located in a place in each school that permits easy access by any member of the school staff or by parents. The manual may be introduced to staff at an in-service session. It is suggested that all school personnel familiarize themselves with the content by perusing it in its entirety at least once. Later, when information on specific topics is required, the manual may serve as a convenient reference.

The manual has been organized into four major sections:

Section I: **The School's Role in Child and Adolescent Health**, which addresses new challenges and



opportunities in school health, the development of an effective school health program, appropriate school health curricula, and a safe and healthful environment.

Section II: **Basic School Health Services**, which addresses health assessment, nursing practice in the school setting, care of children with special health care needs, and infectious disease control.

Section III: **Prevention and Health Promotion**, which addresses nutritional health, physical fitness and sports, mental health, sexuality and reproductive health, injury and violence prevention, tobacco control, substance abuse prevention, oral health, and health issues of newcomers to this country.

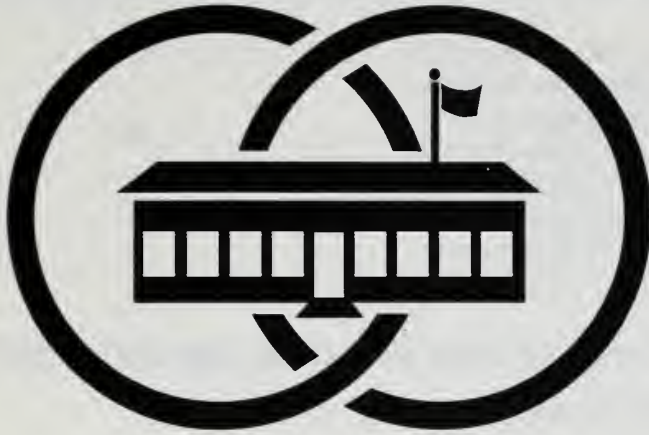
Section IV: **General Resources and Index**, which contains names, addresses and telephone numbers of general resources, such as public health offices and prevention centers, as well as a comprehensive index.

Each chapter is organized with four components: 1) text, 2) bibliographic references, 3) resources (e.g., organization names, addresses, and phone numbers, as well as listings of educational materials), and 4) exhibits. These exhibits consist of sample letters, handouts, position descriptions, charts, and other lists. They are designed for you to photocopy or adapt according to your own school's needs.

UPDATING THE MANUAL

MDPH recognizes that school health programs are evolving as the health needs of children, adolescents, and their families change. In order to facilitate updating the manual, it is contained in a three-ring binder with separately paginated chapters and with the publication date printed on each page. Thus, additional information prepared by MDPH or other agencies may be added at a later date. Individual schools may wish to incorporate in this manual the policies and procedures developed locally.

MDPH looks forward to an ongoing partnership with schools in promoting the health of children, adolescents, their families, and the communities in which they live. MDPH welcomes feedback on the use of the manual, suggestions for additional content, and ideas for further distribution. Please send your suggestions to the School Health Unit, Bureau of Family and Community Health, MDPH, 150 Tremont Street, Boston, MA 02111.



Chapter 1

CHALLENGES AND OPPORTUNITIES FOR SCHOOL HEALTH

The School's Role in Enhancing Student's Health

The Link Between Health and Education

A Brief History of School Health

A Comprehensive School Health Program: Definition and Philosophy

School Health as Part of Community Health Systems



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Ever since school nurses and physicians were introduced into schools approximately 100 years ago, the appropriate scope of school health programs has been discussed and debated. Although the concepts of school health are not new, the expectations of the school's role in the lives of children and their families have changed enormously during the past century, especially over the past 15 years since the previous Massachusetts school health manual was published.

THE SCHOOL'S ROLE IN ENHANCING STUDENT'S HEALTH

A comprehensive school health program is important for many reasons:

- On a national level, an estimated one out of four children and youth are at risk for health problems because of poverty. In Massachusetts, according to the 1990 census, 12% of children ages 5 to 18 live in poverty.
- As medical technology improves, more children and youth with special health care needs are attending school. Today, children regularly attending school have chronic health conditions ranging from minor to severe.
- Medical procedures (e.g., catheterization, tracheostomy care) formerly performed only in a hospital may now be performed at home and at school on a fairly regular basis.
- If children and youth are uninsured or underinsured for primary and preventive care, the school health room may become an active triage station (especially on Monday mornings) for a myriad of common health conditions and injuries.
- If children and youth lack access to primary care through their families, the school-based screening program becomes more important for early identification of problems affecting health and the ability to learn.
- Children and youth are at increased risk of violence, sexual abuse, teen pregnancy, and HIV infection, and the school health program may provide access to the health care system for students either directly or through referrals to appropriate medical or social services.

All of these societal trends converge with the following special characteristics of schools to support the concept of the school as a critical access point for services to children and their families:

- Schools can deliver services efficiently because they are the only institutional base where children, aged 5



through 16, and most youth from ages 16 to 18, spend a majority of their time.

- Schools may offer a less intimidating environment than hospitals and physicians' offices for delivery of health education or care.
- Schools provide a community base for case coordination, case management, and advocacy for children.
- Schools are excellent sites for collecting population-based data to conduct needs assessments and to monitor the health status of children, as they have access to all children enrolled in schools.

THE LINK BETWEEN HEALTH AND EDUCATION

For many years, advocates and providers in both the health and education systems have identified key links between a healthy child and an effective learner. System reform initiatives in both areas have acknowledged the important relationship between health and education. For example, the National Education Goals for the Year 2000 include linkages between health and education.

Other national initiatives also emphasize the strong relationship between health and education. For instance, Healthy Children 2000 lists approximately 170 national health promotion and disease prevention objectives affecting mothers, infants, children, adolescents, and youth, some of which pertain to the education-health link. Healthy Children 2000 is part of Healthy People 2000, a document that contains a set of 300 national health goals and objectives selected through a consensus process. These goals are being monitored during the 1990s to track the health status of Americans. Key goals and objectives for improving child and adolescent health status in Massachusetts, consistent with the national goals, are listed each year in the commonwealth's Title V Maternal and Child Health block grant application.

In 1992, the Harvard School Health Education Project conducted at the Harvard School of Public Health carried out a policy analysis of 25 national reports related to school-based health promotion. Five clear themes emerged from their analysis of these diverse reports:

1. *Education and health are interrelated.* Education affects health, health affects education, and many of the health problems affecting children, and thus their education, are preventable.
2. *The biggest threats to health are social morbidities.* Social morbidities as defined by the American Medical Association are "those threats to health that are primarily the result of social environment and/or behavior." Many of these cause injury and death, including homicide, suicide, child abuse and neglect, developmental problems, and lead poisoning.
3. *A more comprehensive, integrated approach is needed.* Fragmentation of programs and services is a



barrier to the effectiveness of services to children and their families. There is an urgent and compelling need for more comprehensive and coordinated policies, programs, and services.

4. *Health promotion and education efforts should be centered in and around schools.* While there is still much debate about the school's role in children's lives, the school is where most children spend much of their time and is the one place in the community that is accessible and known by families.

5. *Prevention efforts are cost-effective.* The social and economic costs of failure to promote health and prevent disease are high and they continue to escalate.

In Massachusetts, the Department of Education (MDOE) has identified a primary goal for education in the commonwealth: *"Education should contribute to the learner's physical and emotional well-being and development, in an environment that fosters positive self-esteem...Physical, intellectual, emotional, and social development of children is the shared responsibility of the entire community and all of its institutions."*

A BRIEF HISTORY OF SCHOOL HEALTH

The importance of school health programs in Massachusetts and the rest of the nation has been recognized for almost 150 years. The role of the school in a student's health has expanded considerably during that time, as the health problems of concern have changed from infectious diseases to the new morbidities and community social problems.

As early as 1850, the Massachusetts legislature required that *"physiology and hygiene shall hereafter be taught in all public schools of the commonwealth in all cases in which the school committee shall deem it expedient"* and *"all school teachers shall hereafter be examined in their knowledge of the elementary principles of physiology and hygiene, and their ability to give instruction in the same."* In the 1890s, health inspections were begun in the Boston schools in an effort to control the spread of serious communicable disease.

The first school nurse was placed in four New York City schools in 1902 after a settlement house worker found a 12-year-old boy who had been excluded from school because of a tiny sore in his mouth. Many states, including Massachusetts, soon followed New York City's lead in introducing public health nurses to the school setting.

In 1912, Massachusetts law required that every child in the public schools be examined each year by a physician. These medical inspections ranged from a search for major physical defects to a careful assessment of each student's physical, mental, and social potentialities. In the 1920s, health education was added to the medical inspection and became a responsibility of the school nurse. In 1930, *The Handbook on School Hygiene* was published as a reference for administrators, health officers, public health nurses, and others



working for the health of the school child. It was subsequently revised in 1934, 1940, 1951, and 1957.

For over half of this century, school health programs were inspired by a model that defined the role of the school conservatively, excluding direct medical services except for occasional immunizations and some health screenings. The so-called “health organizer” or “school-linked” model views the school as an organizing link between the child in the school and the community’s health service resources. It has had two primary aims: (1) to ensure minimal public health protection by preventing contagion and (2) to provide schools with protection against certain forms of legal liability from playground injuries. In response to student needs, some school systems further enhanced their school health services by including health assessments, early identification and referral of students with health problems, services for children with special health care needs, and close linkages to special education and health education programs.

The traditional model of school health was challenged in the late 1960s and early 1970s, especially in urban, low-income communities where large numbers of children were not receiving any primary care or other preventive services in the community. This situation led to the development of school-based health centers. To a great extent, these centers, as well as other expanded school health services, have evolved in communities when they have had the support of local primary care physicians.

The school-based health center model (also known as the school-based nurse practitioner model) is one in which primary care is provided to children and youth at a school site. It was developed as an expansion of the “health organizer” model of school health. The Cambridge schools and health department developed an early model of this type of health care on site in schools. In addition to the delivery of direct care in school, in consultation with local physicians, the nurse practitioner coordinated a team to provide health education, mental health and other human services, as well as case management to children with chronic health conditions or serious risk characteristics.

Typically, school nursing and school health services in Massachusetts, as in the rest of the country, have been provided either by the local school district alone, by the local health department alone, or by a combination of both. Since the 1960s, school health activities in the Massachusetts Department of Public Health (MDPH) at the state level have been supported by federal funds under Title V (Social Security Act) Maternal and Child Health block grant. Beginning with the first Massachusetts school-based health center in Holyoke in the mid-1980s, Title V monies supported the development of ten centers in high schools in the commonwealth. Today there are over 30 school-based health centers being implemented or planned for elementary, middle and senior high schools across Massachusetts, supported by the Commonwealth’s Health Protection Fund.

Thus, the school health role has expanded tremendously, moving from prevention of communicable diseases in the early days to the



prevention of social morbidities, now the biggest threat to the health of our youth. Health professionals and school personnel currently share a wide range of responsibilities related to students' health.

A COMPREHENSIVE SCHOOL HEALTH PROGRAM: DEFINITION AND PHILOSOPHY

Comprehensive school health is a multifaceted, collaborative approach to developing the total well-being of individuals. The purpose of a comprehensive school health program is to encourage the best possible health outcomes for each student and to teach health concepts that help students make responsible decisions regarding their own health in the future. Reaching these goals requires the involvement of the school, family, and community. In a comprehensive model, the school relies on the family, as well as community health services, to ensure that each child enters school in a state of physical, mental, and social well-being. The family and community look to the school to refer to appropriate resources those children whose social, emotional, and health problems become apparent in school. The family, school, and community all cooperate with each other to keep the child healthy throughout the school years.

Over the past decade, advocacy for comprehensive school health programs has expanded considerably. Nationally, there have been many efforts to develop a consensus definition and model of comprehensive school health. Traditionally, a comprehensive school health program model has consisted of three components — health education, health services, and a healthful environment — all acknowledged to be interconnected in the context of the local community.

Another model is one developed by the U.S. Centers for Disease Control and Prevention, as promoted by the American School Health Association, that includes eight components: health education, health services, social and physical environment, physical education, guidance and support services, food service, school and worksite health promotion, and integrated school and community health promotion.

Any model used for a comprehensive school health program must be flexible and adaptable to changes in structures and health problems as they arise in the community. Therefore, Massachusetts is using the more traditional three-component conceptualization of comprehensive school health programs for planning and advocacy, shown in the following model:





An overview of some of the activities that might be included in each of the three major domains of a comprehensive school health program are listed below. Note that many areas of focus (e.g., nutrition, violence prevention, physical activity) have activities in each of the three domains of the school health program. For example, a comprehensive school health program with respect to nutrition might have nutrition components in health education, nutrition assessments and referrals in health and human services, and the provision of healthy foods in school breakfast and lunch programs in the healthful environment domain. Hence, the boundaries of the three domains are flexible as they apply to local schools and communities.

Health Education

- Comprehensive, planned, integrated, sequential health curriculum with broad program goals and health instruction with teaching-learning objectives for all grade levels from pre-kindergarten through grade 12.
- Adequate teacher preparation and in-service training.
- Resource materials and consultation for teachers.
- Health education for parents and other adults.
- Educational adaptations for children with special needs.
- Multicultural approaches.

Health and Human Services

- School readiness programs, including health screening and assessment of emotional and social readiness.
- Health appraisal by observation and periodic examination.
- Emergency policies, facilities, and first aid.
- Immunizations, screening, and communicable disease procedures.
- Medication administration.
- Nutritional assessment.
- Oral examinations, fluoride treatments and care.
- Cumulative records, including health, accidents, and social development.
- Coordinated referral systems and collaboration with community resources.
- Student support and student assistance programs.
- Health counseling for students and families, with referral and follow-up.



- Consultation and recommendations regarding participation in physical education, special education programs, and other school activities.
- Substance abuse counseling and tobacco cessation programs.
- In those communities where access to primary care is limited, the provision of primary care in school-based health centers.

Social and Physical Environment

- Friendly, respectful staff and pupil relationships.
- Healthful school schedule.
- School site of adequate size, location, and safety.
- School construction adequate in size, sanitation, safety features, lighting, furniture, acoustics, heating, and ventilation.
- Safety inspection, drills, and patrols with pupil planning and participation.
- Proper school maintenance.
- Adequate and safe physical education and recreational facilities with qualified staff.
- Safe transportation.
- School breakfast, lunch, and milk programs that meet standards.
- Training for school personnel.
- Student involvement in educational decision making.
- Shared decision making models through active, effective school councils.
- School organization and structure for increased student achievement and strengthened adult-student relationships.
- Innovative instructional strategies.
- Strong family and community involvement.

SCHOOL HEALTH AS PART OF COMMUNITY HEALTH SYSTEMS

The comprehensive school health program has developed within a community context. With children and youth as its target population, it is an important component of a broad-spectrum community health and human services system and community wellness program. A community health and human service system is most effective when it has a strong commitment to promoting the health and well-being of all its citizens, in addition to preventing health problems within its population.



The role of public agencies, including the MDPH, is to promote system-building capacity at the local level which may then enhance the health status of children, youth and their families within the community. The MDPH, Bureau of Family and Community Health, has identified the following principles for a community system of care. As an integral part of this system, the comprehensive school health program may also be guided by these principles.

A system of care is:

- community-based
- family-centered
- coordinated
- comprehensive
- prevention-oriented
- supportive of individual living patterns
- available early and continuously
- inclusive of parents/families/consumers as partners with professionals
- responsive to cultural, language, and socio-economic differences
- non-categorical in approach
- integrated throughout the health, education, and social service systems
- high quality
- flexible and adaptable to change.
- cost effective

In order to assist communities in developing their comprehensive school health programs as part of a community system of care, the MDPH is collaborating with the MDOE. The two agencies are taking the following seven action steps to achieve this goal:

1. Reviewing existing statutes, regulations, and policies governing school health.
2. Establishing school health standards.
3. Providing continuing education for school health personnel.
4. Promoting appropriate credentialing of school health personnel.
5. Developing child health data and information systems.
6. Exploring ways to support reimbursement of school health programs.



7. Exploring new models of health care delivery in schools.

Examples of activities, consistent with these strategic areas, include school policies for children and youth with infectious diseases, guidelines for HIV/AIDS curricula at all grade levels, violence prevention activities, guidelines for health care plans for students with special health care needs, certification of school nurses, and procedures for the administration of prescription medications in the schools. **The Comprehensive School Health Manual** represents the most recent effort in the guidance of schools and communities as they enhance their health programs within the school setting.

As communities continue to develop comprehensive school health programs, they may discover unique opportunities to promote the health of their children and youth. Comprehensive school health programs, with close collaboration between school health education and school-based health and human services, can support the resiliency of students and enhance their knowledge and skills for maintaining health. At the same time these programs identify students at risk for health problems and provide needed health services within the school and/or timely referral to community agencies. The ultimate goal is a healthier, more teachable student population — and a healthier community.

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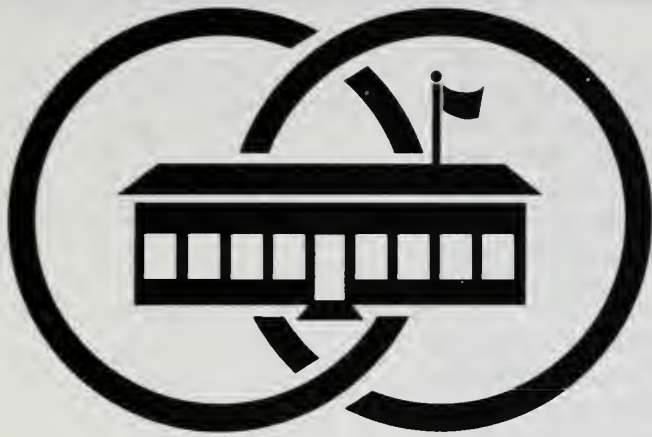
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Chapter 2

DEVELOPING AN EFFECTIVE SCHOOL HEALTH PROGRAM

Comprehensive School Health Advisory Committee

School and Community Health Assessment

Program Planning and Implementation

Program Evaluation

Summary



University of

College of

Department of

Professor

Student

Course

Date



This chapter describes strategies for developing a comprehensive school health and human services program which encompasses health education, a safe and healthful environment, and health services. Although all components are mentioned in this chapter, the health service component receives greater attention because currently there are few guidelines for developing school health services in Massachusetts. The other components are addressed in greater detail in other chapters.

A comprehensive school health and human services program should focus on health risk factors, employ multiple methods and approaches, take into account a diversity of needs in the community, involve those most affected by the program, and involve specially trained staff to deliver the program.

Establishing an effective school health program helps students get the most from their education and helps provide a safe, caring, healthful environment for students. An effective program includes the following components:

- *A comprehensive school health advisory committee*, which reviews the needs assessment, goals, and objectives; monitors program effectiveness; and provides recommendations for program development and improvement.
- *A school and community health assessment*, which evaluates the health status of the students and community and identifies and prioritizes health issues to be addressed.
- *A planning and implementation process*, based on the results of the needs assessment, which identifies key steps and develops a plan.

An action plan, which addresses health disparities and provides a vision (with goals and objectives) and appropriate strategies to reduce the negative impact of those disparities.

Interdisciplinary collaboration, which involves personnel from all areas of the school and encourages them to work together to improve school health and human services.

Staffing patterns for school health personnel in comprehensive health education, mental health services, external contractors, and health services.

Inter-agency agreements, which clarify the working relationship between the school and community-based agencies providing school health or human services.

Models for delivery of services, which describe possible ways to deliver school health and human services, such as through a traditional



model (school nurse working with a school physician), a school-based health center, or a family health center.

Policies and procedures for decision making and the procedures for implementation of program plans.

Planned, written emergency procedures for emergencies, group emergencies, and disaster plans, along with preventive activities and record keeping and documentation.

School health facilities, to address health care needs and requirements of school personnel and students.

School health records, which provide an accurate, cumulative, specific, objective, and confidential record of each student's health status.

- *Program evaluation procedures*, to document and evaluate the comprehensive health program.

Data collection, to track important health issues and implement programs for prevention of identified health issues, ensure documentation for budget development, and document health care system changes.

Evaluation, to measure success through both process and outcome evaluations.

These components do not necessarily follow in sequence. Some, especially the needs assessment, should take place before addressing other components; others may take place concurrently. This chapter presents information on how each component is integral to a comprehensive school health and human services program and provides guidelines for implementation. Typically, the following sequence is followed:

Establish advisory committee → Assess health status of school and community → Identify health disparities and risk factors → Develop a strategic plan (action plan) → Implement program → Evaluate program → Reassess, modify and implement revised plan

COMPREHENSIVE SCHOOL HEALTH ADVISORY COMMITTEE

A district-wide school health program advisory committee, an essential component of a successful comprehensive school health program, reviews the needs assessment, monitors program effectiveness, and provides recommendations for program development and improvement. Sample responsibilities could include the following:

- Assist in the development of a school and community needs assessment which identifies student health needs.



- Guide the school health services program.
- Review state and federal requirements related to school health services.
- Review and develop program guidelines in such areas as environmental health, health appraisal, communicable disease control, emergency health care, and comprehensive health education curriculum.
- Review and develop guidelines for the implementation of program goals, health services, program objectives, policies and procedures regarding personnel, facilities, and supplies.
- Make recommendations to the school committee or designee on school health issues.
- Serve as an advocacy group for improved health status in the community.
- Develop resources for the school health program.
- Participate in evaluating the outcomes and effectiveness of the school health program.

Membership of the committee should be broad and ideally include parents, board of health officials, school nurses, the school physician, members of the administrative, teaching, and counseling staffs, the health and human services coordinator, supervisor of the school health services, a health educator, special educators, and students. A workable committee is broadly representative of the community and has no more than 20 people.

Because the committee should promote and encourage links between the school and the community, it should strive for a diverse and sizable representation to allow for participation by a greater number of people and enable new voices to be heard. The membership should be open to volunteers interested in school health issues such as local and regional health and human service providers, state agencies, primary care providers, business, religious, and service organizations, the police department, and other local officials.

The whole committee should meet as necessary, but, at a minimum on a quarterly basis at a time of day or evening and at a location that is most convenient for committee members.

Meeting agendas should be planned and distributed in advance. It may be important to prepare participants ahead of time in order for them to feel comfortable and encourage their participation during meetings. Parents who have not had experience serving on committees or whose first language is other than English may wish to be contacted and briefed by the school prior to attending their first advisory committee meeting.

The committee may wish to organize small work groups that are project specific or establish standing subcommittees in such areas



as violence prevention, health policies, or health curriculum. For example, a working group including a school nurse, a teacher, and an administrator may work on projects in consultation with a larger committee. The Massachusetts Department of Education (MDOE) Health Protection and Drug Free Schools Advisory Councils are examples of standing committees that are integral parts of the larger committee.

A committee's collective knowledge, expertise, and influence can be a powerful force on behalf of the comprehensive school health program; it can identify health and social problems related to the community's youth, develop viable solutions and identify key resources.

SCHOOL AND COMMUNITY HEALTH ASSESSMENT

One of the major tasks of the comprehensive school health program advisory committee is, in collaboration with the school health services staff, to identify the need for school health services and the feasibility of programs, projects, curricula, or materials while helping the school committee or its designee set priorities. The health needs of a specific student population in the school district must be clearly documented and not simply presumed to exist. Furthermore, programs should be implemented in response to the student population's health needs — not because it appears to be a good idea or has been implemented successfully in another school district.

An advisory committee may recommend needs assessment protocols, with the actual assessment implemented by a subgroup of the advisory committee, an outside consultant, the nursing supervisor or a school administrator. A needs assessment may be conducted by communicating with representatives of the school and community through surveys, face-to-face interviews, and focus groups and by reviewing health statistics from state and local sources. It may also include reviewing existing research or instrumentation and consulting with experts on the content and method proposed. An assessment should answer questions such as:

- What are the demographics (cultural, linguistic, economic, and social) of the school population?
- What data on health status (e.g. teen pregnancy, school drop-out, and communicable disease rates) are already available from local and statewide sources?
- Are there health disparities in the student population?
- What health issues and problems (e.g. peer violence, suicide, anorexia) are identified by students, parents, faculty, and administration?

Exhibit 2-1 contains a sample school and community needs assessment instrument. The MDPH and MDOE issue health status reports annually that will be helpful in assessing local health needs.



PROGRAM PLANNING AND IMPLEMENTATION

After the school and community health assessment is completed, the advisory committee should discuss and share findings with appropriate school and community officials such as school committee members, the superintendent, principals, local health officials, school health educators, the pupil personnel services coordinator, the special education director, local health providers and human service agencies, and parents. Based on needs assessment results and community priorities, the committee should recommend action steps and assist the school department in the development and implementation of program plans.

Action Plan

As the advisory committee and school department develop a plan for the school health program, it is helpful to construct a vision statement, with goals describing desired changes or objectives, for example: "Students and staff will improve their nutritional habits." An even more specific statement is, "Students and staff will reduce their lunchtime fat and sugar intake by 15 percent during year 1 of the program." Vision statements evolve from a focus on the most important health issues and specific health status disparities identified by the committee during the needs assessment process. An action plan featuring strategies for addressing these issues is then developed. Exhibit 2-2 contains a sample action plan.

Interdisciplinary Collaboration

Interdisciplinary collaboration, in the context of comprehensive school health and human services, involves personnel from all areas of the school working together cooperatively through the delivery of health education and services. Interdisciplinary collaboration can provide many advantages and opportunities:

- Participants bring a variety of expertise, skill, experience, and creativity to the project.
- When interdisciplinary teams focus on a particular student, at-risk students are more likely to be tracked for referral and support and less likely to be lost to follow-up. Collaboration reduces the incidence of duplication of efforts and services as well.
- Members of interdisciplinary groups enjoy opportunities to share their roles, responsibilities, skills and special interests with members of the school community, families, and the broader community.
- Participants share decision making through the discussion of facts and possible solutions, thus promoting the consensus building so essential in caring for children with special health care needs in the school setting.
- Involvement of parents, students, and other members of the community ensures that key resources and concerns from the community are brought to the school's attention.
- Collaboration provides a mechanism for identifying resources and individuals with expertise on particular topics and skills.



There are both formal and informal mechanisms for interdisciplinary collaboration in a school and within a community.

Formal Collaboration

Formal collaboration typically occurs in three ways.

1. *An organized team meets regularly to identify and address issues.* An example of this type of collaboration is a case management team that addresses the needs of students who are identified as “at risk” and develops a plan to meet an individual student’s needs through referral and on-site support services, or both.

Some members may be permanent; others may change from time to time. Usually one member has primary responsibility for the student. Permanent members of this team may include the principal, guidance counselor, school psychologist, and school nurse; temporary or ad hoc members may include teachers, parents, and experts from the community. The identification and referral program, described in Exhibit 2-3 is an example of an organized team. Other examples include child abuse teams or CORE teams who write up individual education plans (IEP) for special education.

2. *An “ad hoc” team is formed to address a specific health or behavioral problem and disbands when the issue is addressed or problem resolved.* For example, a team may be organized to deal with increased injuries on an elementary school playground. The team might include the principal, the school nurse, teachers, playground monitors, custodian, and parents. Resolution might consist of the removal or repair of a particular piece of playground equipment, increased supervision, or a plan for regular maintenance of playground equipment.

3. *Two or three people in the school meet formally on a regular basis to share information and discuss common issues, concerns, and problems.* For instance, the school nurse and physical education teacher may meet every quarter to review the status of sports physicals.

Informal Collaboration

Informal collaboration occurs on a temporary, as-needed basis for information exchange, as when the school nurse informs the physical education teacher that a particular student may not participate in gym because of a recent injury.

Collaboration occurs in the three key areas of a comprehensive school health and human services program: health services, health education, and a healthful environment (see Chapter 1). Collaboration in these three areas involves the following actions:



1. *Health services*

Ensure that the health needs of both the individual student and the student population as a whole are integrated with the education program.

Facilitate coordination among health service program and a range of student and family support programs.

Document and interpret the health needs of the entire student population and the role of the health service program in the school.

Identify health and safety issues of the school environment and work toward resolving them.

Refer students to appropriate counseling and guidance services.

Use community resources such as police, fire department, and library, as appropriate, to address school needs.

2. *Health education*

Develop, review, and revise health education curriculum.

Share resources that are available through agencies, services, and individuals within the community.

Cosponsor health fairs that target specific populations, such as students, teachers, or parents and community.

Promote nutritional and exercise benefits for students and staff.

Provide workshops or in-service education on health-related topics. Include parents who have expertise in given areas, as well as other experts from the community.

Encourage and coordinate wellness programs such as weight control, walking and fitness programs, nutrition, tobacco cessation, stress reduction, and blood pressure monitoring.

3. *Healthful environment*

Facilitate support groups to meet students' needs.

Provide opportunities for private, nonjudgmental counseling and consultation for staff, students, and parents.

Provide workshops or in-service education on a variety of health-related topics.



Review the general atmosphere of the school to assess whether procedures are in place that respect the rights of students and faculty while defining their responsibilities for promoting a positive learning climate.

Develop a plan for regular inspection and maintenance of high-risk areas (labs, shops, gym, playground, etc.).

Assess general cleanliness and availability of soap, paper towels, toilet paper, and sanitary napkins.

Assess compliance with universal precautions, proper disposal of medical or infectious waste, and the need for in-service training and ongoing reinforcement of both.

Assess participation in the school breakfast and lunch programs.

Staffing Patterns for School Health Personnel

All school districts will typically have written position descriptions for school personnel responsible for school health programs, including school nurses and/or school nurse practitioners, school physicians, and health aides.

A school district may have a variety of certified or board-registered staff hired as regular employees or as outside contractors who implement comprehensive health education and human service programs. In some school districts, staff serve dual roles as school nurse and health coordinator or as health educator and health coordinator. Such staff typically have two position descriptions or else one description that synthesizes the responsibilities of both roles. Each school and/or school district provides written position descriptions and an organizational chart in which the school health and human services program are clearly defined.

School health education and human service program staff typically fall into at least four categories:

1. *Comprehensive health education staff.* Health teachers are certified in health education to teach students in grades K–9 or 5–12. Certified elementary teachers (grades pre-K–8) or certified middle school teachers (grades 5–9) may also teach health but should have knowledge of the field of health education, curriculum content, and methods of teaching health before being assigned that responsibility. *Health educators* are not always school based; they may be community based and work in the schools as well as in other settings. They may not be certified teachers, but they may hold national certification as a certified health educator specialist (CHES). *Health coordinators* are responsible for the pre-K–12 comprehensive school health and health education program, including training and ongoing support.



2. *School counseling and psychological services staff.*

These staff members include certified school guidance counselors, adjustment counselors, social workers, and psychologists.

3. *Outside contractors.* These outside contractors may include mental health workers, substance abuse counselors, physical therapists, occupational therapists, visiting nurses, nutrition counselors, and speech and language pathologists.

4. *Health services staff.* These staff members may include the school nurse, school physician consultant, health aide, school nursing supervisor, school nurse practitioner, and health education/human services coordinator. Each school system develops its own position descriptions for these roles. Exhibits 2-4 through 2-9 present sample descriptions for general school health services staff.

External Agency Agreements

Typically, a formal written agreement is required whenever school health or human services are provided by an agency other than the school department itself. This agreement, sometimes called a “memorandum of agreement” or “memorandum of understanding” clarifies the responsibilities of each party. Examples of such agreements are ones between a school department and board of health, between a school department and a Visiting Nurse Association or other community service agency, between a school department and a local hospital or health center, or between an education collaborative and the school district. Such agreements provide effective mechanisms for collaboration between the various agencies. Agreements should be reviewed by the school legal counsel for compliance with state, federal, and local laws and regulations. Exhibit 2-10 shows a sample formal written agreement.

Models for Delivery of Services

There are several different models for the delivery of school health and human services. The most common, the traditional model, consists of a school nurse with a physician consultant or school physician hired by the school department, or the local health department providing health services to a school district. In addition, there are school-based health services that provide primary health care in the school setting. These have evolved in response to increasing demand for primary care and health and human services that are readily accessible to children and adolescents. Two “enhancement” models that address this need are the school-based health center and family health centers.

Traditional School Health Service Model

The traditional school health service model centers on the school nurse as the manager of the program. The nurse collaborates with a designated school physician who provides medical consultation, as well as such related activities as sports physicals for students without a primary care provider. In some schools, a health aide or health assistant performs support activities (such as record keeping and vision and hearing screening) under the supervision of the school nurse.



The number of registered nurses responsible for the school health services program should be determined by a needs assessment of the health status of the student population/community. When data on the health needs of local students are not readily available, regional or statewide health status data may provide a useful starting point for planning the staffing patterns. National standards recommended by the American Nurses Association include 1 registered nurse for every 750 students in general school populations, 1 registered nurse per 225 students in mainstreamed populations, and 1 nurse per 125 students in severely or profoundly disabled populations. Other factors to consider are the number of children with special health care needs, number of buildings, and distance and/or travel time between buildings.

In school systems with more than one nurse, a nursing supervisor is likely to be appointed to provide leadership and ensure consistency of nursing standards, policy development, program implementation, and employment practices. The nursing supervisor is also responsible for collaborating with other disciplines to plan and establish a comprehensive school health program.

School-based Health Centers (SBHCs)

A school-based health center is a licensed clinic located on the campus of a school. The school-based health center (SBHC) model of care emerged in the early 1970s in California and Texas and in Massachusetts in the 1980s in response to the challenge of meeting the health care needs of adolescents. Adolescents, a group that typically engages in high risk behaviors and that may have complex medical and social needs, use physician services less frequently than all other age groups. A combination of factors make adolescents a difficult population to reach; they may be uncomfortable in conventional health care settings and have no way of accessing medical care during school hours. The SBHC is one strategy for decreasing barriers to care for adolescents. SBHCs are now being developed in all types of schools, including elementary, middle, and high schools, to enhance access for children who lack regular health care.

Although a SBHC may provide some of the same services as the school health services the SBHC differs in some important aspects: it offers primary care, including diagnosis and treatment services, counseling, referral and follow-up for students enrolled in the SBHC program, not necessarily to the entire school population. The target population is students who do not have a primary care provider or who do not regularly see their community primary care provider. Students enrolled in the SBHC receive their care from a multidisciplinary team of professionals, typically including physicians, nurse practitioners, physician assistants, nurses, social workers, and counselors. SBHCs focus on preventive health care and offer services that are comprehensive, accessible, and developmentally appropriate.

In addition to improving access to primary care, a SBHC promotes positive health behaviors and increases student health knowledge and decision making skills. Education related goals include improved involvement in school, decrease of absenteeism and increase in the number of children who complete school.



In Massachusetts, currently operating SBHCs and the planned SBHCs operate as satellite programs of larger health care facilities, such as a hospital or a community health center. The licensed health care provider provides a wide range of services and resources, as well as a mechanism to ensure continuity of care during periods when the SBHC is closed for school vacations or for the summer. As of January 1994, the Department of Public Health supports twenty-two community health care facilities which are operating or planning the operation of SBHCs at the elementary, middle and high school levels statewide.

SBHC programs must work collaboratively with the school health program and the community. Mechanisms for joint planning and daily communication regarding the health issues of students are essential for achieving success. Planning a school based health center requires the participation and support of the school administration and health program staff (including the school nurse), students, parents, and community providers that serve youth. The participation of representatives from these groups is key. The SBHC is a part of the health service system for children and adolescents that complements existing school and community health and social service.

The Department of Public Health along with the Division of Medical Assistance (DMA) has drafted quality standards for SBHCs. The standards will be finalized late in 1994. The standards development project is part of a larger DMA project to improve access to comprehensive health care for children and adolescents in Medicaid managed care programs. Compliance with established standards will ensure provider ability to maximize third party reimbursement for services and support the SBHC model. A list of requirements for a school based health center is detailed in the section on **School Health Facilities** later in this chapter.

Family Health Centers

Nationwide, increased attention is being paid to the concept of family health centers (FHC) located at or near schools to address the health care needs of America's families. The FHC introduces a new approach to community-oriented primary health care and draws on the resources already in place within schools as well as existing community services to ensure access to preventive comprehensive care for uninsured or underinsured families. FHCs provide continuity of care, ensure necessary follow-up, and prevent gaps and redundancies in the delivery of health care by improving the linkages between health services that now exist in many schools and the community's organized health care delivery system.

School-based FHCs offer a full menu of services to meet the needs of school-aged children and youth, their younger siblings, their working parents, and extended family members living in school catchment areas. The typical FHC offers management of minor acute illness to clients of all ages, as well as monitoring and management of stable, chronic illnesses. In addition, specific interventions for different age groups should be available. The FHC will also provide health education and environmental health support. Exhibit 2-11 presents a sample menu of services. Staff typically include nurse



Policies and Procedures

practitioners, consulting physicians, program managers, dentists, dental hygienists, paraprofessionals, pharmacists, mental health professionals, and child and adolescent psychiatric nurses, social workers, and nurse health educators.

General Guidelines

School departments require well-defined school health policies and procedures. Although frequently spoken in one breath, *policies* and *procedures* are different. A *policy* is a guide for decision making within an organization, that is a rule for action. A *procedure* is a sequence of steps that should be followed in implementing policies or plans. Whereas policies are broad, allowing flexibility, procedures are specific and detailed. Both require signed and dated review and revision at least every two years.

The process of developing and disseminating school health policies helps staff and community to clarify the vision of school health and provides an opportunity to plan for health improvement. Well-defined school health policies are critical to a highly-functioning school health program.

Policies are not developed in a vacuum. They may be based on federal, state, local laws, or regulations; on standards established by state agencies such as the Department of Education, Department of Public Health, or the Board of Registration in Nursing; or on standards set by professional organizations such as the American Nurses Association (ANA), National Association of School Nurses, American Academy of Pediatrics, American Alliance for Health, Physical Education, Recreation and Dance, and American School Health Association. Codes of ethical conduct for the various professions are also involved when developing policies (e.g., the ANA's **Code for Nurses**, set out in Exhibit 6-1).

In addition to following federal and state statutes and standards, school health policies are based on a school district's philosophy and the community's values and beliefs. Some school policies may be long-standing, such as emergency care or maintenance of health records, others may have been newly developed in response to issues that have come under scrutiny nationally, statewide, or locally, such as policies for handling sexual harassment in the schools and policies for tobacco-free schools.

Approval and Communication on Policies and Procedures

Some policies are required by laws and regulations, while others are best practice policies. Policies generally require approval by the school committee. In cities or towns where the board of health participates in the provision of school health services, the board is also involved in the approval process. After their development or revision and their subsequent approval, health policies are to be disseminated or communicated to all school health staff, all other school personnel, parents, and students. In addition, a copy of the health policy manual is made available for review by any interested parent or student. Whenever possible, important new policies are publicized by the local media.

Copies of certain school system policies *and* procedures, such as emergency and urgent care policies, are best distributed and made



readily available in specific areas of the school, such as shops, labs, gym, cafeteria, and administrative offices, and on buses. In addition individual schools may develop their own policies when not in conflict with the school system policies.

Policies and Procedures Manual

Each school district typically has a policies and procedures manual for school health services containing the relevant district- and school-specific information about the school health program. A looseleaf format that permits the addition of new pages with new or revised policies, the removal of outdated content, and the inclusion of relevant forms in each section.

Exhibit 2-12 includes a sample outline for a policies and procedures manual which is fairly comprehensive, while allowing for differences. A school district just beginning to develop a manual will need time to include all these policies. Basic policies that should have first priority are indicated with an asterisk.

Planned Written Emergency Procedures

In every school there are individuals with the potential for emergency medical problems, either known or unknown to them. In cases of illness, accident, or other emergency (see Exhibit 2-13), efficient and effective school procedures are essential. Therefore, planned, written procedures for emergencies are an important part of a comprehensive school health program. Schools should have a current, written plan for the emergency care of a student(s) or staff member(s) experiencing a life-threatening, or potentially life-threatening, illness, injury or emotional crisis that requires immediate action.

First aid is defined as the immediate and temporary care provided to the victim of an injury or illness until the service of a physician can be obtained. This care includes cardiopulmonary resuscitation (CPR), the Heimlich maneuver, and other life-saving techniques. Within the school setting, school personnel have a duty to provide reasonable assistance to an injured or ill student. As a general rule, there is no legal duty outside the school context to aid a person in distress or danger.

School personnel who provide first aid in good faith (first aid that is reasonable in the circumstances) to a student in an emergency are protected from civil liability by the following provision of M.G.L. c. 71, s. 55A:

No public school teacher and no collaborative school teacher, no principal, secretary to the principal, nurse or other public school or collaborative school employee who, in good faith, renders emergency first aid or transportation to a student who has become injured or incapacitated in a public school or collaborative school building or on the grounds thereof shall be liable in a suit for damages as a result of his acts or omissions either for such first aid or as a result of providing emergency transportation to a place of safety, nor shall such person be liable to a



hospital for its expenses if under such emergency conditions he causes the admission of such injured or incapacitated student, nor shall such person be subject to any disciplinary action by the school committee, or collaborative board of such collaborative for such emergency first aid or transportation.

Responding to Emergencies

A health emergency may occur in any school at any time; children can become seriously ill or injure themselves in a number of settings, including playgrounds, classrooms, laboratories, or workshops. Children in school are also at increasing risk for violence-related injuries or emotional crises. Finally, as more and more children with special health care needs are integrated into community schools, there is a real possibility that these children will need emergency care. Children with special health care needs may range from medical equipment-dependent children to those suffering from chronic diseases such as asthma, allergies, seizures, or mental or emotional disorders.

Although much can be done in the school setting to prevent injury or illness, the fact remains that school personnel may need to respond to an emergency, usually with no advance warning, and may need to activate the emergency medical services (EMS) system. An emergency may occur frequently or infrequently, depending on the school or community in question, but when it does, school personnel must be ready to deal with it and be able to contribute to making sure that students (as well as staff) get timely and appropriate emergency medical services.

Schools should have an up-to-date written plan for responding to an emergency, whether it be a life-threatening or potentially life-threatening illness or injury or an emotional crisis that requires immediate attention. All school staff and personnel should be familiar with the plan, which should spell out how they will:

1. Recognize that an emergency has occurred.
2. Provide immediate first-aid care.
3. Contact the local EMS system.
4. Notify the parent or person identified as an emergency contact.

Developing a Basic Written Emergency Plan

1. Convene an emergency care committee for the school. The purpose of the Committee is threefold: to bring together all of the individuals and agencies involved in providing emergency care, to develop policies and procedures for individual and group emergencies, and to develop policies and procedures to prevent emergencies from occurring or to minimize their effect. Participants should, at a minimum, include the school administrator, school health personnel, physical education staff, coaches, parents, and representatives of the local police and fire



departments, ambulance service, and community hospital emergency department.

2. Know the school's needs in an emergency, as well as the staff resources available at the school and in the community. An inventory of these resources, and their services and response times, should be identified and documented. Community resources in turn should receive information concerning the school's needs, resources, and building layout.
3. Develop policies and procedures to be followed in case of an emergency. These policies should include the chain of decisionmaking and notification. They should be kept in a central place.
4. Identify school personnel who will assume responsibility for first aid, calling an ambulance, and notification of a parent or other emergency contact. Include alternative personnel for backup. Ideally, everyone on the school staff should be able to administer basic first aid. *The Massachusetts Department of Public Health (MDPH) recommends that as a minimum standard, at least three persons trained in first aid be available in each school at all times that students are in the school or on the school grounds, including before school and after school.* The suggested ratio is 1 trained staff member for every 100 students. It is especially important that all coaches and trainers, especially those involved in contact sports, should be trained in CPR and other first aid techniques.
5. Ideally, key community EMS providers, including the police and fire departments, and ambulance service, should be familiar with the school layout and emergency plan. They should have toured the school to familiarize themselves with all entrances and exits. (Make sure this takes place *before an emergency occurs.*)
6. There should be sufficient numbers of telephone lines for the school personnel to place an outside call to the EMS system.
7. Key components of the basic emergency plan include:
 - Each student and staff member has an emergency card with current information. These cards are to be kept in a centralized place, available and accessible to staff in case of emergency. Information on the card should include medications, allergies, and a brief past medical history.
 - Telephone numbers of the local EMS system are prominently displayed at all telephones in the school.



- A list of life-threatening or potentially life-threatening or disabling situations is posted in visible and appropriate places and provided to all staff members, especially in gyms, hallways, the cafeteria, auditorium, and bathrooms. (See Exhibit 2-13 for a list of emergency situations.)
- Policies on first-aid and lifesaving procedures are published and the location and use of first aid supplies specified, as well as who will be responsible for maintaining the inventory of supplies.
- Emergency plans are published for special school situations, such as afterschool activities, school bus incidents, and sporting events. Assess the needs for high-risk areas, such as science labs, trade shops, playgrounds, and gyms.
- Training in universal precautions, CPR, the Heimlich maneuver, and basic first aid have been provided to the requisite number of staff members required to maintain the school emergency response, and offered to other school personnel and to students whenever possible.

Distributing and Maintaining the Emergency Plan

1. The emergency plan should be approved by and distributed to all members of the emergency care committee, as well as to all parts of the local EMS system.
2. All school personnel are provided with a copy of the written emergency plan. Provide an annual staff in-service for a review and discussion of life-threatening or potentially life-threatening or disabling situations, with discussion of staff responsibilities and resources available in an emergency.
3. Review, evaluate, and revise the emergency plan annually, or more often if an emergency has occurred. The school committee, school administrator, and school health personnel should sign and date the approved plans, as should other members of the emergency care committee.

Special Considerations

1. *Children with special health care needs.* It is recommended that each child be identified and have a health care plan that anticipates possible emergency situations. Make sure that the local ambulance service is familiar with each health care plan and is aware of the appropriate hospital of destination for the child in question.
2. *Emergency medications for allergic reactions.* For any child with *no* previous history of allergic reactions, the use of epinephrine as an emergency medication requires an order from the school physician.



Immediately call the school nurse or physician. If the school nurse or physician is unavailable, the school must call the EMS system, provide first aid, and then notify the school nurse. The child with no previous history of allergic reaction should be transported to a hospital facility immediately, via ambulance.

In an emergency when the *child has a known allergy or preexisting medical condition*, epinephrine or other emergency medication may be administered by the school nurse or a person authorized to administer prescription medication (as prescribed by the child's licensed provider) under 105 CMR 210.000 (see Chapter 6 for more on administering medications).

Oxygen is not appropriate for general emergency use in the school setting. It is a medication that requires a physician's order for a specific child and is also a fire hazard. If it is prescribed for a specific child, the local fire department should be notified, and precautions should be in place.

3. *Group emergency.* Develop a plan to provide a team approach to respond to the needs of students and staff in *the event of a death, serious injury, or serious illness* involving any member of the school community, such as a suicide, violence in the school, or homicide of a student, faculty, or family member.

Determine local resources ready to provide psychological assistance and *contact the local mental health crisis team before the school needs it.* Find out how to activate the team during and after school hours and how much time they need to send sufficient staff to the school. If there is no community crisis team, there may be one in an adjacent or nearby area.

4. *Disaster plans.* It is critical to have a plan drawn up to deal with community disasters, such as fires, explosions, gas or hazardous materials leakages, or weather hazards. Included in the plans should be policies governing how a community disaster is determined, how local authorities are contacted, how the school should be organized and evacuated to predetermined sites, how transportation will be identified and mobilized, and how parents should be notified about the evacuation. The local EMS provider should participate in drawing up the plan and should always be notified in the event of a disaster or a large-scale incident. School personnel should learn how to deal with possible casualties, as well as how to provide emotional support for students and staff during and after the disaster.

Emergency Prevention Activities

Many emergencies can be averted by careful planning and education of students and staff. Injuries are especially preventable,



including those resulting from violence. (See Chapter 13 for more information on violence and injury.) Nationally, over 20,000 children die each year from injury, and an additional 100,000 survive with permanent disabilities. Some of these injuries occur in schools. There are a number of steps school personnel can take to reduce the incidence of injury in and around schools.

1. Conduct planned inspections of high-risk areas such as labs, workshops, gyms, and playgrounds to identify and eliminate or ameliorate safety hazards.
2. Ensure that first aid supplies for high risk areas include items such as eye wash equipment, fire blankets, and extinguishers.
3. Provide health education information and in-service programs on use of automobile safety belts and bicycle helmets, basic first aid, and CPR. Obtain safety and first-aid materials from the Federal Emergency Management Agency (FEMA), the Massachusetts Emergency Management Agency (MEMA), the National Safety Council, Red Cross, the American Heart Association, and the Injury Prevention and Control Program in the MDPH.
4. Involve local EMS providers in developing injury prevention programs and information for students and staff.
5. Use data collected on emergencies, injuries, and illnesses to help evaluate the emergency plan and to identify and eliminate or ameliorate hazardous situations in the school. Whether or not emergencies have occurred in the school, review the school environment for safety hazards.

Record Keeping and Documentation

Record keeping is essential to an emergency preparedness program. Records are essential in the settlement of insurance claims, to protect school personnel against charges of negligence, and in planning preventive programs. Forms should be developed to include the date, time, place, nature of the incident, general condition of the victim, what care was administered, and the school's disposition of the case (e.g., to whom referred, if anyone). Forms should be made out in duplicate by school faculty at the scene of the incident and filed in the administrator's and nurse's offices. Each report should be placed in the appropriate student's health record.

Incident reports should be reviewed periodically by school health personnel and administrators to determine the location and nature of incidents, and a plan should be developed to prevent or minimize future injuries due to environmental or activity-caused factors.

School Health Facilities

It is traditional for students to go to the nurse's office to consult with the school nurse about a health problem, to obtain first-aid



treatment, to rest for a while if they feel ill, or to wait for a parent to take them home. Although students still use the health facility for these purposes, the functions of the facility have grown in conjunction with the ever-increasing responsibilities of school health and human services personnel. Increasing numbers of students who become ill at school must stay there because their parents work, thereby requiring more rest areas in the health facilities.

The overall environment of the health unit should be conducive to enhancing the well-being of each individual while providing a mechanism for treatment in an acute situation, all in a confidential manner. Each school should have facilities that can best meet the needs of the personnel and services, and it should reflect the needs of the school population. Consideration should be given to projected school enrollment, the need for storage space, and other factors that have a bearing on the total building plan. In planning new facilities, consideration should be given to making the space flexible, so that a school-based health center may be developed in the future. The purpose and daily use of the student health facility provides the best rationale for determining its physical environment requirements.

Functions of a School Health Facility

The school health facility serves multiple functions:

- A conference space where the nurse, physician, teacher, pupil, parent, or others concerned with health counseling and guidance can discuss specific health problems of individual students in privacy.
- A center for the care of students who become ill or are suspected of having a communicable disease, until they can be placed under their parent's care or returned to class.
- A center for provision of first aid and general health care (treatments and medications).
- A center for student health records.
- A service area for health personnel where health appraisals are made; vision, hearing, and other screening procedures are carried out; and immunizations are provided.
- A resource center for health education materials.
- A center to provide a program of expanded school-based primary care services.
- A place for those who require a rest period because of specific health needs.
- A storage area for health supplies and equipment.

Space may be required for (1) waiting and triage, (2) assessment and treatment, (3) counseling, and (4) storage. Following are recommended features of a basic health facility, an enhanced health facility, and a school-based health center. See Exhibit 2-14 for two



sample architectural plans — one for a school health facility and one for a school-based health center and see Chapter 4 for information on building codes.

Recommended Features of a Basic Health Facility

- Adjacent to administration offices and pupil personnel services.
- Ideally, in a quiet part of the school building away from playgrounds, music rooms, gymnasium or noisy machinery.
- A physical layout that allows for individual privacy.
- Reserved for health purposes only.
- Adequate ventilation.
- Brightly illuminated (50 foot-candles or more), with adjustable overhead lights in rest areas, in a closet, and over the first-aid area station.
- Natural light from windows.
- At least one handicapped-accessible toilet facility with hot and cold running water.
- Easily cleaned hard surfaces on floors and walls.
- Adequate plumbing to ensure hot and cold running water for assessment and treatment area.

Waiting and Triage

- Adequate number of chairs for seating in the waiting area (corresponding to student enrollment and frequency of use).
- Wall space with room for educational posters.
- Rack for pamphlets and other current health information, either fastened to the wall or free-standing.
- Bookcase(s) containing health promotion materials that are labeled, retrievable, and accessible; health-related textbooks and information on referral agencies.
- Desk or other suitable writing surface that is visible to the waiting area, with a telephone outlet nearby.
- Telephone with a direct line outside.
- Computer.
- Filing cabinets that can be secured and locked for storage of current health records, emergency response cards, and daily maintenance files.

Assessment and Treatment

- Adequate private rest areas for students with beds or cots, preferably with washable surfaces. The number



of rest spaces should correspond to student enrollment and frequency of use.

- Blankets, sheets, pillows, and disposable pillow cases.
- Folding screen or draperies to provide privacy in the rest area.
- Rest area visible from the nurse's station.
- Rest area fitted with an outlet for its own light source.
- Private examination and consultation room with examination table.
- Bathroom.
- Sink with hot and cold running water.
- Wall-mounted soap dispenser with soap, adjacent to all sinks.
- Wall-mounted paper towel holders, with paper towels, adjacent to all sinks.
- Pedal-controlled, covered trash receptacles, lined with polyethylene trash bags.
- First-aid station with washable (preferably stainless steel) counter tops, under counter drawers for storage, and over counter hanging cabinets with see-through sliding doors.
- Sharps container for disposal of hazardous medical waste.
- At least 15 feet of unobstructed space available for screening programs, and if possible, a sound insulated room for audiometric (hearing) testing.

Counseling and Treatment

- Space that ensures privacy of sight and sound and is easily accessible.
- Private telephone line, as well as an extension telephone.

Storage

- A locked storage cabinet or, preferably, a walk-in closet with floor-to-ceiling shelves for medical and other supplies.
- In-wall medicine cabinet with a secure lock.
- Refrigerator for storage of medication and cold packs

Movable Equipment

- Sphygmomanometer (calibrated annually) and appropriate cuff sizes



- Stethoscope
- Crutches
- Stretcher
- Wheelchair
- Pure tone audiometer
- Vision testing machine such as Titmus
- Oto/ophthalmoscope
- Physician's scale with height rod
- Portable first-aid kit
- Clock with a second hand
- Flashlight or pen light

Suggested First Aid and Other Supplies

- Basins
- Band-aids
- Bandages (various sizes)
- Cold packs
- Cotton-tip applicators (swabs)
- Cotton balls
- Disinfectant for surfaces, spills (fresh within 24 hour 1-10 bleach solution or disinfectant approved by the U.S. Environmental Protection Agency)
- Disposable diapers (may be used for compression)
- Disposable gowns
- Eye cup
- Eye pads
- Eye wash solution
- Latex gloves
- Magnifying glass
- Masks
- Paper cups
- Paper towels
- Record forms (emergency cards, logs, medical sheets, accident reports, state forms, etc.)
- Ring cutter



- Salt
- Sanitary pads, individually wrapped (may be used for compression)
- Scissors (blunt end)
- Slings
- Soap (preferably in dispenser)
- Splints
- Surgi pads
- Tape (different widths)
- Tissues
- Thermometer (disposable) or other mechanism for measuring temperature, such as temp dots
- Tongue depressors
- Triangular bandage
- Tweezers
- Vinyl gloves (for latex allergies)
- Washcloths (disposable)

Recommended Features of an Enhanced Health Facility

This type of facility contains all of the characteristics of the basic facility plus these additional ones:

- Air-conditioning.
- Examination room soundproofed for audiometric (hearing) tests.
- Storage closet large enough to serve as a medicine closet with countertop along one wall (secure locks installed).
- Foot-operated soap dispensers in lavatories and hospital faucets (with long handle on/off levers and overhanging spout faucet) in lavatories and first-aid station.
- Air hand dryers in lavatories.
- Private lavatories adjacent to examination room, with toilets, toilet paper, sinks with hot and cold running water, soap in dispenser, paper towels, and waste receptacle lined with polyethylene bag.
- Sound-absorbing ceiling tile in all areas.
- Bright colors used for materials and furnishings.
- Computer area adjacent to nurse's desk.



- Adjustable door closers to eliminate excess noise.
- Double electrical outlets throughout the unit.
- Pamphlet racks in examining rooms and counseling rooms.

General Requirements for a Health Facility Providing School-based Primary Care Services (School-based Health Center)

A school-based health center that is operated by a hospital or clinic or community health center is licensed (M.G.L. c. 111, s. 51) as a satellite clinic of that health care facility. The following are the basic physical plant requirements for clinic licensure, as defined by MDPH health facility licensing regulations:

- Waiting/reception area, with public telephone and public drinking fountain.
- Offices, including space for secure record storage.
- Nurses' area with medicine preparation/storage and hand-wash sink.
- Examining room with 80 square feet, hand-wash sink, and privacy for sight and sound.
- Utility room with flush rim sink, hand-wash sink, and work counter.
- Storage for equipment and linen, with separation of clean and soiled.
- Janitor's closet with service sink.
- Toilet facilities.
- Ventilation for all rooms without operable windows and for janitor and toilet rooms.
- Accessible to handicapped.
- Corridors 5 feet wide.
- Doors 2 feet 10 inches wide.

Plans for the school-based health center must be sent to the MDPH Bureau of Health Care Systems, Division of Health Care Quality, for approval. Any planned renovations should not take place until the department approves the plans.

Clinics with existing space that are not planning renovation must provide the following:

- Dimensioned plan with all functional areas identified.
- Information about heat, light, and ventilation.
- Information about required spaces that are not provided within the clinic.



Clinics planning renovations must provide the following:

- Construction documents of the area to be renovated with functions areas.
- Architectural, plumbing, mechanical, and electrical plans.
- Copies of plan approval from the Department of Public Safety and the local building inspector.

School Health Records

The value of the health record lies in the information it contains and the manner in which it is used. An effective written account of the facts and events related to the individual's health should focus on the student and his/her needs, and it must be accurate, cumulative, specific, objective and confidential. This record should contain an accurate and complete data base, problems or concerns to which plans are addressed, sequential narrative notes, and outcomes of specific procedures or interventions. A problem oriented health record, sometimes called a positive oriented health record (POHR), establishes a legal, consistent format for documenting and communicating the health status, problems identified, and services provided to the individual student.

Components of the School Health Record

The first eight components of the Massachusetts School Health Record are *mandated by law* (M.G.L c. 71, s. 57). (Exhibit 2-15 through 2-22 are samples of each.)

1. *Massachusetts School Health Record page 1 (PH-M-1)* is used for all entering students. It documents identifying and emergency information, immunization history, and results of special tests and screenings.
2. *Massachusetts School Health Record page 2 (PH-M-1)* is used for all routine physical exams, initial and subsequent, performed by the school physician. It documents past medical history and results of the school physical exam.
3. *Narrative Notes pages 3-4 (PH-M-1 3A)* documents individual health needs, consultations, referral status, home visits, counseling, nurse-parent or nurse-teacher conferences, and personal health education. Sequential narrative notes must adhere to professional standards and follow the nursing process — the systematic process of assessing (deciding what the problem is), intervening (doing it), and evaluating (reviewing the success of the entire undertaking). With the exception of brief telephone calls, which are entered as they occur, it is recommended that all problems be documented in a written plan with narrative notes that use the SOAP format described in Chapter 6.
4. *Private Physician's Examination 2 pages (PH-M-18)* documents the initial comprehensive physical exam performed by a private physician.



5. *Private Physician's Examination, Subsequent Evaluation (PH-M-18A)* documents only subsequent physical exams performed by a private physician after documentation of the initial comprehensive physical exam by a private physician.
6. *Abnormal Findings Notification (PH-M-14)* documents parental notification of abnormal findings on school physical exam and feedback from the private physician.
7. *Audiogram Card (blue) (PH-M-31A)* documents hearing screening levels.
8. *NCHS Growth Chart 4 pages (PH-M-50G) (girls) and NCHS Growth Chart (PH-M-50B) (boys)* document height and weight measurements by plotting on a standardized, sex-specific growth chart. The importance of graphing lies in the adequate interpretation of the student's growth status and early identification of those students at risk who may need referral for further assessment.

The following components of the health record are *not* mandated by law but may serve as examples of appropriate documentation. When they (or equivalents) are used, they become part of the individual cumulative health record:

- *Interval Health History (PH-M-2)* is to be completed by the parent or guardian in order to communicate and keep the student's health status current.
- *Incident Report* documents injuries occurring at school that require referral for further care.

Other health-related information that becomes part of the individual cumulative health record includes such items as laboratory findings, medical or therapy reports, medication or treatment orders, parental consents, health care plans, health-related correspondence, and documentation of parent conferences outcome. See Chapter 6 for medication administration forms and Chapter 7 for Individual Health Care Plan forms.

Computerization of student health records is encouraged, including the use of software dedicated to or available for school health records. All immunization data, screening results, attendance, physical exams may be recorded. When the student transfers or withdraws, the computer printout may go with the student.

Other documentation that may be maintained in general health-related records include delegations to nonlicensed staff; in-service training; building or grounds inspections; health activity assessments, reports, or summaries; and data collection or program evaluation reports.

Confidentiality of Student Health Records

Records kept by the school nurse pertaining to a student's health status and medical care may be regarded as medical records or as



part of the educational record. Depending upon how a record is characterized, it may be subject to differing requirements as to maintenance and confidentiality. As a consequence, the school nurse needs to consider carefully issues of documentation and confidentiality.

General Issues of Confidentiality of Health Information in the School Setting. Health professionals are legally and ethically bound to document all care provided and to maintain the confidentiality of health information. As more health care is delivered in the school setting, this leads to many questions about what is a medical record versus what is an educational record, i.e., when do the student record regulations apply and when do the principles of confidentiality of health information apply? Recognizing the complexity of these issues, both state and national agencies are beginning to address the many questions raised by the schools.

Currently, student health records are considered part of a student's temporary record and as such are protected from disclosure to third parties without the written consent of an eligible student or parent/guardian. Consistent with the current temporary records regulations, these records are accessible to an eligible student, the student's parents or guardian, and authorized school personnel (authorized school personnel are those school committee employees who work *directly with* the student in an instructive, administrative, or diagnostic capacity). The information placed in the student record must relate to the educational needs of the student. (See regulations governing student records, 603 CMR 23.000.)

Not all medical information, however, belongs in the student record. While it is appropriate practice for a nurse or other health professional to document observable facts with respect to a medical condition, medical needs and the care provided, some information is not sufficiently related to the educational needs of a student to be appropriate for documentation in the student record. In addition, health professionals have an ethical and legal duty to protect certain medical information which they possess. Placement of medical information in the school record, where it may be seen by persons other than the student, may violate this duty.

Specific Statutory Protections for Confidential Information under Massachusetts Law. The duty to protect the confidentiality of medical information is clearest in situations where the information is specifically protected by statute. For instance, M.G.L. c. 111, s. 70F prohibits health personnel from disclosing HIV test results, or even the fact that someone has been tested, without the consent of the test subject. Similarly, M.G.L. c. 112, s. 12F creates a category of "emancipated minors" who are given legal authority to make decisions about their own medical diagnosis and treatment. For example, minors who believe themselves to have been exposed to a dangerous disease, such as a sexually transmitted disease, or a minor who believes herself to be pregnant may legally consent to diagnosis and treatment without parental involvement. In fact, the statute requires that the information be held confidential unless the life or limb of the minor is endangered. Such information may be released only with the consent of the minor or a judicial order.



Other sensitive information, such as treatment for substance abuse, may warrant similar protection.

Use of Health Professional's Personal Files. Given this legal duty to protect confidentiality, it is recommended that such information (and other sensitive material) be placed in a nurse's (or other professional's) personal files. According to the Department of Education regulations, 603 CMR 23.04, information maintained in personal files of a school employee, if not accessible to or revealed to school personnel or third parties, is not considered part of the school record and hence would be released only with proper consent or court order. Such records should be kept in a separate locked file accessible only to the nurse or the nurse's substitute. *Of note is that physician's records and records of school-based health centers are not considered school health records and are subject to unique confidentiality protections afforded medical records.*

Use and Maintenance of School Health Records. In the case of medical care which is relevant to the student's educational progress, e.g., medication administration, special diet, or impaired vision or hearing, and which is not subject to unique confidentiality protections, the information may be entered into the student's health record. This record is still regarded as confidential, and access is limited to eligible students, parents/guardians, and authorized school personnel. The school nurse, whether employed by the school committee or board of health, is responsible for keeping the records.

Communication of Information in the Health Record to Other School Personnel. There may be circumstances where information in the student record may need to be shared with certain school personnel to enhance the educational progress of the student or protect his/her safety or well-being. For example, staff may need to be alerted to signs or symptoms of a medical problem and offered a course of action. In such circumstances, whenever possible the permission of the parent or guardian and student, if appropriate, should be obtained prior to disclosure. Information in the student health record, however, may be shared with appropriate school personnel as necessary to protect the well-being or safety of the student.

Documentation

Documentation is the preparing and assembling of written records to authenticate health care provided to the individual student and the reasons for providing such care. According to standards of nursing practice, documentation should be accurate, objective, concise, and well-organized. It must be legible, written in ink, have the signature of person writing the entry, and be current with date and time of each entry. It also must be comprehensive, including all relevant statistics, problem statements, observations, assessments, actions, and outcomes.

Proper documentation is essential to communication and should demonstrate collaboration, coordination, and continuity of health care, including communication with parents. It is especially useful in the following situations:



- Upon school entry.
- When the student is promoted or transfers from one school to another.
- When making referrals to other health care providers or coordinating care with health care agencies or practices.
- When conducting personal health counseling or education
- As the basis of nurse-parent or nurse-teacher conferences.
- When there are legal questions.

Documentation organizes material and approaches student health in a systematic and retrievable format that facilitates the application of the scientific process (also called the nursing process). Recognizing the interrelatedness of problems may help predict and thus prevent problems by highlighting risk factors.

Documentation demonstrates accountability, provides a tool for quality assurance, and substantiates the level of care for legal purposes. Recording care given demonstrates compliance with professional standards spelled out in the Nurse Practice Act and applicable to all settings where nurses are employed. The school nurse may be liable if the care provided is not clearly documented. The old adage, "if it's not documented, it was not done" emphasizes the importance of documentation when legal questions arise. Finally, aside from the necessary record keeping for the individual student, documentation also furnishes useful data for appropriate evaluation and research.

PROGRAM EVALUATION

In order to determine how effective the school is in meeting the health needs of students and staff, it is essential to conduct evaluations of the comprehensive health program. The purpose of program evaluation is to assess whether or not the goals and objectives have been met. Health laws and regulations change, professional standards change, and the needs of students change. Program goals are adapted accordingly.

In order to keep up with those changes, ongoing data collection and evaluation are key to promoting responsiveness in programs, staffing, funding, and resources. The results and recommendations of the evaluation process then become input for subsequent planning. This feedback loop allows plans to be revised as needed in order to keep programs appropriate, realistic, and effective. It also provides the health team with measures of accountability.

Data Collection

School health programs across the nation are taking on increasingly large roles. Improvements in medical technology and changes in education law have made it possible for children with acute and chronic illnesses to attend school. School health programs provide on-site services during the school day and are involved where health issues such as hunger, neglected physical conditions, and lead poisoning are first identified. Accurate and timely data are critical to reflect



these changes in the school environment so that appropriate steps can be taken.

There are eight major uses of data related to school health programs:

1. Conducting local and state needs assessments.
2. Monitoring state-mandated programs and screenings.
3. Complying with federal reporting requirements.
4. Directing program planning and management.
5. Developing policy directions and initiatives.
6. Assuring follow-up services after problem identification.
7. Evaluating programs and services.
8. Tracking health status improvement.

Soon, a cooperative effort between local schools and state departments of public health and education in Massachusetts will result in an integrated and standardized school health data system responsive to both local and state needs. The Model School Health Information System project under development is designed to enable schools to collect and analyze health data in a systematic and standardized manner, and it will produce a national prototype health information system capable of standardizing data collection and reporting on health status indicators for grades K-12. All six New England states are involved in system development to facilitate standardization. The system will be pilot tested in six schools in Massachusetts followed by a feasibility study investigating statewide and national implementation.

Automated Data Collection and Reporting

Automating cumbersome manual processes makes good management sense and results in more efficient storage and retrieval of data. The creation of a database, as opposed to a paper-based file system, makes possible the efficient generation of summary statistics, demographic descriptions of students served, and services provided. Report generation, made possible through automated systems, provides an accurate account of individual and system-wide student health, which can then be compared to statewide data. Risk factors, infectious disease outbreaks, and important trends can be identified through a well-designed management information system (MIS).

Computer-generated reports save time and money. The speed and accuracy of computer calculations make timely data collection possible. Rapid information processing facilitates timely decision making to ensure responsive services to the individual student.

Automation makes effective medical records management easier and permits clinical staff to identify and track “at-risk” students for proper follow-up.

There are four basic categories of data collected in any comprehensive school health and human services program:



1. *Health status indicators.* These include chronic illnesses or conditions (e.g., asthma, diabetes, mental retardation), injuries (intentional and unintentional), and functional levels (e.g., physical limitations, behavioral problems, cognitive levels). Data on the number and types of diagnoses of children with special health care needs have implications for staffing and program development in order to ensure that appropriate programs are available.
2. *Service utilization measures.* These include information on the utilization of health and human services programs within the community, such as the use of emergency room services, participation in EPSDT, and hospitalizations. The number of students who lack a primary care provider or regular source of medical care may have implications for the types of services offered by the school.
3. *Sociodemographic and environmental measures.* These include variables such as race/ethnicity, number of siblings, and family structure, air and water quality indexes, and neighborhood characteristics.
4. *Behavioral risk indicators.* These include indicators on smoking, alcohol and drug use, seatbelt usage, sexual behavior, and nutritional intake, among others.

The Massachusetts Maternal and Child Health Services Block Grant for Fiscal Year 1994 identifies several population-based statewide needs-assessment categories of priority indicators for use statewide in assessing the health of children and adolescents:

- adolescent pregnancy
- immunizations
- lead poisoning
- unintentional and violence related injury
- high-risk behaviors
- sexually transmitted diseases
- estimated prevalence of handicapping conditions and chronic illnesses
- nutritional status
- overall health
- estimates of severity of disabilities
- family support needs
- early childhood risk factors

Many of the indicators are available to communities via the community health network area process.



Immunizations (DPT, measles, polio, rubella, and mumps), vision and hearing screenings, heights and weights screening, scoliosis screening, and physical examinations and health histories are all required by regulation at various intervals.

Systems Development

Data collection and reporting may be costly in terms of equipment, training, maintenance, and human resources. There is no point to collecting data if resources do not exist for analysis and reporting or if there is not a specific plan for their use. There are many examples of data collection efforts that have resulted in large databases and or file cabinets and boxes full of paper that have never been analyzed. It is preferable to collect fewer pieces of data and ensure resources to carry out the analysis and reporting steps. Additional data collection, analysis and reporting can always be added.

Basic tips on information systems development emphasize the following components:

1. Be clear about priorities. What data are already available? Are they the most critical, or are there other data elements more crucial to service delivery? Who will have access to data and how will the data be used?
2. What reports and or in what formats should the data be available? Ask the school principal, superintendent, school board members, parents and other key groups what specific data they feel are critical.
3. Be aware of the commitment of senior management to the MIS. Support from the top is critical to success. Without it, those who are collecting the data may be operating in a vacuum, and data collection will be less than successful.
4. What resources are available? Is appropriate hardware and software available, or can they be purchased? Are local resources available to provide technical assistance and system management (e.g., data backup and retrieval should a hardware problem arise)? Is there a maintenance agreement on the hardware?

These four areas are critical to success. Attention to them will form the foundation of a useful system. School nurses are encouraged to consult with the computer coordinators within their district concerning technology plans. It is to the benefit of the school health program to be integrated within the overall district's computer system.

The greatest challenge to developing and maintaining local school health information systems is the availability of technical expertise for ongoing support and development. School nurses should be an integral part of the development of screening and reporting design as their local system is developed. Computer coordinators will be knowledgeable concerning hardware and software acquisitions and are local to the site to provide technical assistance and consultation as needed.



Evaluation

Process Evaluation

Process evaluation (also called formative evaluation) is an ongoing process, occurring while a program or materials are being developed. The assumption is that the results of an evaluation that goes on during this phase will be used to help improve the program or materials being designed. Process or formative evaluation begins at the start of the program planning and design and continues through implementation, observation, and revisions.

The first phase is *needs assessment*, which establishes baseline data on the need for a service, a program, curriculum or materials. It should always take place before embarking on a project.

During the *design development and planning*, as materials are being developed, developers should test them with knowledgeable practitioners and potential users for comprehensibility, persuasiveness, user friendliness, appeal, and other factors.

During *field testing*, the program or materials are tested for effectiveness. Data collected will help fine-tune materials, pinpoint any problems, aid in the revision process, and assist in the development of new materials. Developers should use different situations or settings to try out the program (reflective of the target audience), whether it be students, faculty, parents, or all of them.

As the program is being implemented, evaluation helps staff answer questions such as: "Is the program being used?" "How?" "Is what we're assessing the same as what was planned?" "Are we reaching our intended targets?" "What should we be monitoring in our program?" This type of evaluation should be used as an ongoing self-assessment management tool.

Outcome Evaluation

In contrast, outcome evaluation (also called summative evaluation) examines the success of the program in meeting specific objectives, such as whether there were changes in health behavior or in the health status of students and/or staff. Did the program make a difference? For instance, as a result of a program to improve food in vending machines, did students eat less junk food? Should the program be continued?

Outcome evaluation asks, "What are any immediate changes as a result of the program?" It may look at participant satisfaction, numbers served, and objective measures of change. *Impact evaluation* looks at longer-term changes that can help answer the question of overall program effectiveness. Some examples may include reducing costs, improvement in student health or productivity, or lower rates of school violence over an extended period of time.

It may be helpful to consult a skilled external evaluator for outcome and impact evaluations—someone who is experienced in conducting evaluations, has some medical knowledge, and understands the mechanics behind day-to-day triage in a health office. A well-planned and executed evaluation has a control or comparison group. The basis of any good outcome evaluation is a good management information system for all children in the program.



CHAPTER 2

One example of outcome evaluation is a high school that is evaluating the success of setting up a school-based health center in helping to decrease absenteeism due to illness. Another example is the evaluation of a school system's changes in immunization statistics after implementing immunization programs at school registration.

SUMMARY

All of the components described in this chapter together form a comprehensive school health and human services program. Key components are a student health needs assessment; advisory committee input; a vision of school health; policies, programs, and procedures; and a mechanism for evaluation. Because of the important role health plays in educational achievement, health education and health and human services in schools are key links in a primary care system that responds to the health needs of the entire school community.

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DEVELOPING AN EFFECTIVE SCHOOL HEALTH PROGRAM



Wold, S. (1990). *School Nursing: A Framework for Practice*. North Branch, MN: Sunrise River Press.

RESOURCES

Health Status Data

Community Health Network Areas (CHNA) Report
Massachusetts Department of Public Health
Community Health Network
150 Tremont Street
Boston, MA 02111
(617) 727-6194

The state is broken down into 27 areas in which interested parties may come together to improve health in their community by looking at data and responding to any health needs and health disparities.

Behavioral Risk Factors Surveillance System (BRFS) Report
Massachusetts Department of Public Health
Bureau of Health Statistics
150 Tremont Street
Boston, MA 02111
(617) 727-2735

School-based Health Centers

General information

Massachusetts Department of Public Health
School Health Unit
150 Tremont Street
Boston, MA 02111
(617) 727-0941

Licensure requirements

Massachusetts Department of Public Health
Bureau of Health Care Systems
Division of Health Care Quality
10 West Street
Boston, MA 02111
(617) 727-5860

Emergency Plans

Posters, flyers and brochures

American Heart Association
Massachusetts Affiliate and Greater Boston Division
20 Speen Street
Framingham, MA
(508) 620-0700

American Red Cross
180 Rustcraft Road
Dedham, MA
(617) 461-2000
(800) 462-9400

Federal Emergency Management Agency
Region I
J.W. McCormack POCH/4th Floor
Boston, MA 02109-4595
(617) 223-9540



CHAPTER 2

Massachusetts Department of Public Health
Injury Prevention and Control Program
150 Tremont Street
Boston, MA 02111
(617) 727-1246

Massachusetts Emergency Management Agency
P.O. Box 1496
400 Worcester Road
Framingham, MA 01701
(508) 820-2000

National Safety Council
303 Twin Dolphin Drive, Suite 520
Redwood City, CA 94065
(800) 845-4672

Films and Videos

Emergency One Productions
P.O. Box 20
Woodmere, NY 11598
(800) 221-1002

Pyramid Film and Video
P.O. Box 1048
Santa Monica, CA 90406
(800) 828-7577



EXHIBIT 2-1

Sample School and Community Needs Assessment

I. Describing the Student Population of Your School

1. Grades the school(s) include:
2. Total school(s) population.
3. Number of students in each age group that you serve?

Pre-kindergarten (≤ 4 yrs) _____ Ages 8-10 _____

Ages 5-7 _____ Ages ≥ 11 _____

4. Description of community (e.g., urban, suburban, rural, mixed)

5. a) Racial composition of the student body (percentage of following)

White _____ African American _____ Asian/Pacific Islander _____

Hispanic _____ American Indian/Alaskan Native _____

Other (specify) _____ Unknown _____

- b) Ancestry:

Puerto Rican _____ Cambodian _____

Dominican _____ Vietnamese _____

Central American _____ Laotian (including Hmong) _____

Other Hispanic _____ Other Asian (including Pacific Islander) _____

Brazilian _____ Pakistani/Asian Indian _____

Cape Verdean _____ European _____

Other Portuguese _____ African _____

Haitian _____ North American _____

West Indian _____ Other (specify) _____

Chinese _____ Unknown _____

6. Languages spoken by students at your school(s):

a) percentage of the student body that does not speak English _____

b) percentage speaking English as a second language _____

7. Socioeconomic status of students at your school(s)

a) average family income (or range of family incomes) of the students at the school _____

b) percentage of student body eligible for the free-lunch program _____

c) percentage of parents/guardians currently unemployed _____



CHAPTER 2

II. Assessing the Capacity of Your School(s) in Comprehensive School Health

- 1) Reproduce as many copies of this page as you need. You may wish to conduct this assessment using the three components of health education, health and human services, and school health environment, or you may wish to break them down into more areas.

Comprehensive School Health Area*	Person(s) in charge in your school	Your working relationship with this person: good, average, no relation.	Activities you have carried out in past in this area	School resources (e.g., human, \$, info, and material resources, existing collab or committees	School needs (e.g., human, \$ info, material, collaborative)	Local, county, or state regs or policies related to this area (describe)

*Source: Education Development Center, Newton, MA., 1993. Adapted with permission.

- 2) Is there a school health advisory council, committee, or board in your school(s)? What does it do?

- 3) Based on the capacity of your school (district) as described above and the direction in which you want to move, what are the next steps you might take to expand the comprehensive school health program for students in your school(s)?



III. Assessing the Health-Related Needs of the Students in Your School(s)

1. Which of the following are major health-related problems or issues among the students in your school(s)?

RANK TOP FIVE	PROBLEMS/ISSUES	NO	YES	ESTIMATED PREVALENCE*	SERVICES/SUPPORT FOR STUDENT AVAILABLE IN YOUR SCHOOLS(S)
	Absenteeism				
	Nutrition/eating disorders				
	Sexually transmitted diseases				
	HIV/AIDS				
	Pregnancy				
	Chronic illness				
	Children assisted by medical technology				
	Unintentional injuries				
	Depression				
	Stress				
	Suicide				
	Relationships with family and friends				
	Sexual identity issues				
	Alcohol and other drug abuse				
	Sexual assault/rape				
	Acquaintance violence				
	Family violence and abuse				
	School dropout				
	Parental substance abuse				
	Runaway				
	Lack of regular physical activity				
	Other (describe:)				

2. In the column to the left on the above chart, rank the five most important health-related problems or issues for students in your school(s). (1 = most important, 2 = second most important, etc.)

* Number of persons who have a stated problem at a given time.

Source: Education Development Center, Newton, MA., 1993



CHAPTER 2

IV. Assessing the Community's Capacity to Provide Comprehensive Health Services to Students

1. List below the five student health problems or issues you rated as most important on the previous page and provide the following information about related services available in your community.

PROBLEMS/ ISSUES	Community Services Available Yes	No	Name, Address, & Phone Number of Agency(s)	Name of Contact Person(s)	Criteria Students Must Meet to Obtain Services	Days & Hours Services Available	Fees for Services (\$)	Are Available Services Adequate & Appropriate for Students	If services are not adequate or appropriate, what needs can you identify?

Source: Education Development Center, Newton, MA., 1993.



2. In general, do students in your school(s) know they can get information and/or health services from the agencies you listed on the previous chart?

3. List community coalitions or task forces that have been active in school-age or adolescent health issues.

4. What does each coalition or task force do? (For example, name a concrete product, goal, or outcome.)

5. Are you or any other school staff involved with each coalition or task force?

6. If yes, describe the involvement.

7. How could your school(s) and the community work together more effectively to meet students' health needs?



Sample Action Plan

Here is an example of an issue and its actions for the action plan form on the next page:

Issue/Problem	Component(s) of Comprehensive School Health Program Involved	Vision Statement*
1) "50% of students have no access to primary care"	Health Services	"100% of students will have access to quality health care within 2 years"

Outcome Objectives

"Coordinate access to health services for all students"

Related Strategies

- Needs assessment
- Program development
- Outreach



Your Action Plan

- 1) The four most important issues/problems relating to comprehensive school health for students in our school that we feel a need to address now are:

Issue/Problem	Component(s) of Comprehensive School Health Program Involved	Vision Statement*
1)		
2)		
3)		
4)		

* A vision statement is a broad, general statement describing a desired change or goal.

- 2) The single most important issue/problem relating to comprehensive school health and human services in our school that we feel a need to address now is: (choose 1 from the above)

- 3) Describe the situation:

- 4) Our vision statement related to this issue/problem:



EXHIBIT 2-3

Identification and Referral Program (Student Assistance Program)

A Student Assistance Program identifies and helps students with health or behavior problems. It provides a structure which promotes effective and efficient use of resources within the school and linkages with community-based health and human service agencies. It strives to prevent duplication of services and provide support to students with a range of problems.

Many schools have established student assistance or intervention programs that focus on alcohol and other drug issues. According to some studies, one out of four students is a child of alcoholic and/or drug-addicted parents. Studies indicate that support programs for these students can be quite effective and may be expanded to deal with other health issues such as suicide prevention, child and sexual abuse, eating disorders, and teen parenthood.

- The school agrees on policies which address how it will identify and refer students.
- A school team is designated as the overall coordinating body consisting of school administrative, counseling, nursing, teaching and support staff as well as community agencies where appropriate. A clinically trained coordinator serves as key contact and is typically either on staff or employed by contract with a community agency. Team members participate in specialized training on methods of designing and implementing programs.
- Appropriate case identification is key. In some cases, teachers easily recognize that student behavior has changed. They dress differently, may change class work habits, fall asleep in class, or miss a lot of school. School nurses may note students appearing in the health room or school-based health center on a regular basis. Students may seek out staff to talk frequently.
- Teachers, school nurses, parents, or students recommend and encourage students to seek help and contact the team coordinator. Some students may refer themselves for help. The team and/or coordinator receives the referral, consults with appropriate professional, meets with the student and his or her parent (if appropriate), and refers the student to an appropriate program. Some schools provide support groups and individualized counseling by specially trained school personnel or through linkages with community-based agencies who provide services on site in the school building. *Student confidentiality is maintained in these groups and individual counseling sessions.*



EXHIBIT 2-4

Sample Position Description

SCHOOL NURSE

Recommendation: The administrator and school nurse should review and revise the position description at a minimum of every two years based on changing student health needs.

Scope of Responsibilities

The school nurse is responsible for developing, implementing and managing a school health program for a school population as defined by the school district. Responsibilities include program management, nursing services, collaboration, health education, community health planning, and professional practice.

Supervision Received

The school nurse reports to the school nursing supervisor (if available) and to the chief administrator of the school building. In some cases, the school nurse reports to the board of health administrator or nursing supervisor. School physicians are also available for consultation.

Supervision Given

The school nurse supervises the health aide/technician and others as defined by the position description, e.g., licensed practical nurse, health services secretary.

Suggested Qualifications

- **must have a valid license** to practice as a Registered Nurse in Massachusetts (M.G.L. c. 71, s. 53);
- hold a minimum of a baccalaureate degree in nursing from a college or university program in nursing accredited by the National League for Nursing;
- have a minimum of two years of supervised nursing experience in community health or child health prior to entry into school nursing practice;
- work toward (and subsequently maintain) certification in school nursing, community health/public health nursing, family nurse practitioner, or pediatric/school nurse practitioner by a nationally recognized professional nursing organization.
- school nurses hired after June 1993 are required to meet the certification requirements as developed by the Massachusetts Department of Education.
- maintain certification in cardio-pulmonary resuscitation and First Aid from a recognized provider, i.e. American Heart Association.

Responsibilities

Program Management

Establishes and manages a comprehensive school health program consistent with the Massachusetts guidelines, regulations and statutes governing nursing and school health, and local school district policy:



- advises a school health advisory committee that is appointed by the school committee or designee
- consults with the school physician, school administrators and others to establish, review and revise policies, procedures and specific programs for comprehensive school health education and services;
- works with others to develop a needs assessment and data collection procedures;
- ensures the orientation, training, supervision and evaluation of paraprofessionals as needed to comply with the Nurse Practice Act and other relevant statutes and regulations;
- organizes and implements state-mandated programs such as immunization surveillance and screening programs;
- promotes positive safety practices both within and outside of school buildings, and ensures that the school has an emergency plan which is communicated to personnel and students;
- maintains comprehensive school health records;
- collaborates with school administrators and personnel in assessing and improving the social and emotional climate of students and faculty; involves them in maintaining a healthful school environment;
- uses population-based data collection to plan and evaluate the school health program;
- prepares regular written reports for school officials and MDPH and other agencies describing the services provided by the program, numbers of students served, etc.; interprets school health service needs and the role of the school nurse to the school and community;
- carries out communicable disease prevention and infection control based on current guidelines for universal precautions, prevention of bloodborne pathogens exposure and hazardous medical waste disposal.

Nursing Services

Using the nursing process, collaborates with the parent/guardian and student, where appropriate, to develop and implement an individualized health care plan for the student:

- collects information about the health and developmental status of the student, his/her family, and significant others, in a systematic and continuous manner including health and social histories, screening results, physical assessment, emotional status,



performance level and health goals; makes home visits as needed;

- develops a nursing diagnosis and care plan with specific goals and interventions delineating school nursing actions specific to student needs and coordinated with the efforts of other providers and school personnel; implements plans in a manner aimed at improving health and educational status.
- provides medically prescribed interventions, including medication administration (based on state regulations), and provides care to ill children on a daily basis;
- responds to frequently encountered health issues, providing counseling and crisis intervention when required, e.g., adolescent pregnancy, substance abuse, death of a family member, suicide; responds to child neglect or abuse issues (as required by Massachusetts statute);
- assesses student response to nursing actions in order to revise the data base, nursing diagnoses, and nursing care plan and to determine the progress made toward goal achievement; documents pertinent information in student records or confidential nursing notes.
- provides first aid to injured children and staff; provides everyday care of acutely ill children; manages children with communicable disease.

Collaboration

Collaborates with other professionals, team members and community providers in assessing, planning, implementing, and evaluating programs and other school health activities, so as to maximize and coordinate services and prevent duplication:

- establishes a process to identify students at risk for physical and psychosocial problems, communicates health needs to other school personnel as appropriate and establishes a referral system using both internal and community resources;
- participates as a team member; with parental consent when indicated, shares information with other team members about children with special health care problems which affect learning and growth; acts as an advocate for the student and family when appropriate; attends Special Education Team meetings;
- includes the student and parent in the team conference whenever possible and appropriate;
- identifies health-related needs for inclusion in the individual education plan;



- serves as a member of pertinent committees and teams, e.g., crisis intervention team, support groups for grieving students, etc.;
- when the school is planning or implementing a school-based health center, participates on the SBHC advisory committee;

Health Education

Assists students, families, and groups to achieve optimal levels of wellness through health education and promotion:

- identifies need for health education; teaches the basic principles of health promotion and disease prevention to students and staff, using principles of learning and appropriate teaching methods;
- assumes responsibilities for in-service programs for school personnel for first aid, emergency care procedures, and current health issues;
- acts as a resource in health education to school personnel, students and families; serves as a member of the curriculum committee for health education;

Community Health Planning

Participates with other members of the community to assess, plan, implement, and evaluate school health services and community services which include the broad continuum of primary, secondary and tertiary prevention:

- uses population-based data;
- understands and applies core public health functions of assessment, policy development, and assurance;
- uses community resources for referral of students with unmet health needs, including the need for a primary care provider; participates in the planning and implementation of new services;
- interprets school health service needs and the role of the school nurse to the school and community;
- uses the media to convey important health information and advocate for the role of the school health program in promoting the health of the student population.

Professional Practice

Applies appropriate nursing theory as the basis for decision-making in the school setting while expanding knowledge and skills in response to the student health needs and participating in research:

- demonstrates current knowledge in such areas as (a) professional issues in school nursing, (b) school and community health, (c) communicable disease control, (d) growth and development, (e) health assessment,

DEVELOPING AN EFFECTIVE SCHOOL HEALTH PROGRAM



(f) special health conditions, both chronic and acute, (g) injury prevention and emergency care, (h) health counseling, health education and promotion, (i) current adolescent issues;

- assumes responsibility for continuing own education; obtains expert consultation, supervision and peer review as needed;
- collaborates with local schools of nursing to provide student practica in community health, as well as to obtain nursing education resources.

Adapted from American Nurses Association Standards of School Nursing Practice, 1983.



CHAPTER 2

EXHIBIT 2-5

Sample Position Description

PHYSICIAN CONSULTANT TO THE SCHOOL DISTRICT (SCHOOL PHYSICIAN)

Recommendation: The school administrator develops a contract with the school physician/physician consultant which includes the employment terms, as well as the specific responsibilities. This contract shall be reviewed and/or updated at least every two years.

Scope of Responsibilities

The school physician/physician consultant contracts with the school to provide medical expertise and consultation in the development and implementation of the comprehensive school health program. The school nurse may request consultation on individual students or groups of students with specific health issues at any time. The school physician acts as a resource.

Qualifications

- **must have a valid license** to practice medicine in the Commonwealth of Massachusetts (M.G.L. c. 71, s. 53).
- knowledgeable about the health needs of children and adolescents.

Additional Suggested Qualifications: The school physician/physician consultant should, in addition, be board certified or board eligible in pediatrics or family practice. When the primary student population includes adolescents, the medical consultant or school physician should have additional education in the sub-specialty of adolescent medicine.

Responsibilities

Consultation to the Comprehensive School Health Program

- provides general consultation to school nurse and to the school district on matters relating to the health of the school population;
- collaborates with the school nurse in identifying the need for and developing policies and procedures governing school health services for individuals or groups of students, which are then shared with the School Committee for adoption;
- participates as a member of the School Health Advisory Committee;
- provides consultation on the development of policies pertinent to the health and safety of the school, e.g., emergency care plan, first aid program, bee sting protocol, HIV/AIDS, environmental safety, athletic safety;
- collaborates with the school nurse, school administrators and other pertinent school personnel, as well as the Department of Public Health, to develop and implement a program for immunization against com-



municable diseases and control of other infectious illnesses, e.g., bloodborne illnesses, parasitic diseases, and tuberculosis; assists in developing policies on exclusion and readmission of students based on the aforementioned conditions;

- collaborates with the interdisciplinary comprehensive school health education staff to develop educational programs specific to the current needs of student, faculty and parent groups on topics such as nutrition, child development, family life, sexuality, HIV/AIDS prevention, etc.;
- collaborates with the school nurse, teachers, support staff, and parents on specific health issues of individual students as they relate to the school setting, including classroom management of the child with physical or emotional problems;
- when indicated or requested by the school nurse, communicates with the child's primary physician on medical issues pertinent to the school setting;
- when indicated or requested by the school nurse, reviews the reports of physical examinations performed by the student's primary care provider.

Physical Assessment

- completes the health assessments on such children who do not have this service performed by a primary care provider;
- provides the physical examination of children applying for health certificates in order to obtain employment permits under M.G.L. c. 149, s. 87 and students participating in competitive or contact sports, prior to that participation (for students who do not have this service performed by a primary care provider);
- examines students referred by the school nurse or other personnel because of health issues identified during screening and/or frequent school absences (if this service is not provided by a primary care provider);
- conducts physical examinations on children as needed for special education assessment.

Health Education

- in collaboration with the comprehensive health education staff, assists in presenting educational programs as needed by faculty, parents and students;

Availability at Interscholastic Football Games

- M.G.L. c. 71, s. 54A requires assignment of a physician or a person trained in emergency medical care to interscholastic football games played by teams representing public secondary schools.



CHAPTER 2

Coordination with Community Providers

- In collaboration with the school nurse, interprets the needs and responsibilities of the school health program to the school committee, the community and other health care providers within the community;
- Cooperates with other medical and public health professionals in prevention programs designed to enhance the health of children and adolescents within the community.



EXHIBIT 2-6

Sample Position Description

SCHOOL HEALTH AIDE/ASSISTANT

Scope of Responsibilities

The school health aide assists in the school health program as determined by the school nurse (who is a registered nurse). Therefore the scope of responsibilities will vary according to school health program needs, the capabilities of the school health aide and the availability of the school nurse to provide supervision. When the school nurse determines that certain tasks may be delegated to the school health aide, such delegation shall be under the supervision of the school nurse and consistent with the Board of Registration in Nursing regulations (244 CMR 3.05). (See also Chapter 6 for Regulations Governing the Administration of Prescription Medications in Public and Private Schools.)

Minimum Qualifications

- possess a high school diploma or its equivalent;
- demonstrate sound judgment;
- be able to read and write English;
- respect and protect the confidentiality of students, staff, families, etc.;
- be willing to accept nursing supervision;
- complete training in both cardio-pulmonary resuscitation and a basic first aid program, and maintain the necessary certifications;
- complete the Department of Public Health's requirements for vision and hearing screening training;
- demonstrate clerical proficiency.

Supervision Received

The Health Aide receives supervision from the school nurse appointed under the provisions of M.G.L. c. 71, s. 53.

Responsibilities

To be assigned by the school nurse, these responsibilities may include but are not limited to:

Assisting in Health Care Activities

- performs vision and hearing screening and related tasks, such as recording results, sending letters to parents/guardians, etc.;
- weighs and measures students; completes graphs of heights and weights;
- assists with preparation for health activities such as physical examination of students, immunizations, Mantoux testing, etc.;



- administers medications as delegated by the school nurse, after having received the required training and according to the Regulations Governing the Administration of Prescription Medications in Public and Private Schools (105 CMR 210.00). (This is applicable in school districts registered with the Department of Public Health for delegation of prescription medication administration.);
- provides first aid care to students with minor injuries;
- reports all illnesses and injuries to the school nurse for professional review, care and/or follow-up;
- contacts parents of ill or injured children.

Performing clerical functions

- records health information, e.g., results of various screening tests, immunization information, etc.;
- maintains an up-to-date master file of student health emergency information, etc.;
- sends notices to parents, tabulates returns and follows up on non-respondents;
- provides ongoing communication to the school nurse regarding the status of health notices;
- distributes information, forms, etc., to teachers and administrative staff;
- develops computer skills as needed.



EXHIBIT 2-7

Sample Position Description

SCHOOL NURSING SUPERVISOR

Scope of Responsibilities

The School Nursing Supervisor manages the total school nursing program, providing nursing leadership within the school system. She or he coordinates the clinical aspects of the comprehensive school health program, collaborating with other members of the health services and health education team. In this process, the supervisor uses a public health model of assessment, policy development, and assurance.

Supervision Received

The School Nursing Supervisor reports to the school administrator as defined in her/his position description and collaborates with the designated School Physician in developing and implementing the school health service program.

Supervision Given

The School Nursing Supervisor supervises all clinical nursing staff providing services in the school health program, as well as those unlicensed personnel, e.g., health aides as designated in the organizational chart.

Qualifications

- **must have a valid license** to practice as a Registered Nurse in Massachusetts;
- possess a minimum of a baccalaureate in nursing from an accredited nursing program. (A masters degree in nursing or related field is preferred);
- have a minimum of three years experience in school nursing or a related field, one of which is in a management position;
- maintain certification in cardio-pulmonary resuscitation; trainer's certification for the supervisor or her delegatee is recommended;
- assume responsibility for updating knowledge and skill in community health, management and related fields as new information emerges;
- complete ongoing continuing education programs pertinent to the evolving specialty area of school health and school nursing practice, as well as meet the continuing education requirements for licensure in Massachusetts.

Responsibilities

Needs Assessment

- using available demographic, health and school system data, identifies health needs of the student population;



- develops surveys, questionnaires and other tools for obtaining information.

Planning

- assumes leadership in the establishment of a school health service advisory committee consisting of representation from such groups as school administration, faculty, students, parents and community providers;
- based on needs assessment develops program goals, objectives and action steps;
- coordinates planning with interdisciplinary colleagues in the comprehensive school health education and human services program.

Implementation

- employs, orients and assigns qualified personnel to implement the school health program;
- implements communication systems which promote participatory management;
- participates in the development of an interdisciplinary plan for each building to ensure that students in need of services are identified in a timely manner and appropriate intervention is initiated;
- develops and implements written policies and procedures for the clinical services and programs addressing health issues, e.g., immunizations, medication administration, services for children with special health care needs, school-wide injury prevention programs, special programs such as groups addressing eating disorders, smoking cessation and violence prevention;
- develops and implements documentation systems at both the individual student level and the programmatic level;
- provides clinical consultation to the health education staff, physical educators and other administrative and teaching staff;
- participates in interdisciplinary teams such as the crisis team, child abuse team, etc., to ensure that integrated systems are in place which address the comprehensive health needs of the student population;
- carries out communicable disease prevention and infection control based on current guidelines for universal precautions, prevention of bloodborne pathogens exposure and hazardous medical waste disposal;



- ensures that there is an emergency care plan in place which is communicated to all staff and is closely coordinated with community emergency care procedures;
- collaborates with other school administrators and teachers, promotes a physically and psychologically healthy school environment;
- promotes positive linkages and referral mechanisms to community providers for a range of services dealing with child and adolescent health;
- seeks opportunities to interpret the health needs of school-age children and adolescents, the goals of the health service program, and the importance of health education to administrators, school committee members, faculty, families and the general community, through special reports, the media, health fairs and other special events;
- prepares and administers the health services budget; seeks opportunities to apply for outside sources of funding for the school health service program.

Evaluation

- compiles statistical reports as required by the school system, and state agencies;
- evaluates nursing and other health service staff
- reviews changing trends in health needs and the outcomes of programs to determine need for revision of goals and objectives.

Staff Development

- implements an ongoing continuing education program for staff;
- encourages staff to participate in pertinent conferences and workshops addressing a range of school health issues;
- provides ongoing formal and informal feedback to staff about their progress in achieving the goals of the program, encouraging their continued educational and professional development.

Other

- collaborates with local nursing education institutions, e.g., provides student practice in the school health programs, guest lectures, participates in nursing research; seeks opportunities to give consultation on the specific issues of school-age children and adolescents; publishes when possible.



EXHIBIT 2-8

Sample Position Description

SCHOOL NURSE PRACTITIONER (Family Nurse Practitioner, Pediatric Nurse Practitioner)

Scope of Responsibilities

The Nurse Practitioner's responsibilities vary according to the specific school system. In some school systems, the Nurse Practitioner will be the primary care provider for the students registered in the school-based health center. In other systems where there is no school-based health center she/he practices in an expanded role for the general student population.

Supervision Received

The Nurse Practitioner receives clinical supervision from a designated physician. When functioning as part of the school health service team, she/he receives administrative supervision from the manager as defined in the specific position description.

Supervision Given

The Nurse Practitioner functioning as the primary care provider within a school-based health center gives supervision to those licensed and unlicensed persons functioning within the SBHC and as defined by her/his position description. If the Nurse Practitioner functions within the general school health program, she/he likewise is responsible for those licensed and unlicensed personnel as defined by the position description.

Qualifications

- must have a valid license to practice as a Registered Nurse **in the Expanded Role** in Massachusetts; (see M.G.L. Chapter 112 - the Nurse Practice Act for a description of this expanded role)
- possess a minimum of a baccalaureate in nursing from an accredited nursing program; (A masters degree in nursing is preferred); possess/maintain certification as a School/Pediatric or Family Nurse Practitioner;
- have a minimum of three years experience in school nursing or a related field;
- maintain certification in cardio-pulmonary resuscitation and first aid;
- have an identified physician who provides consultation;
- assume responsibility for updating knowledge and skill in community health, management and related fields as new information emerges;
- complete ongoing continuing education programs pertinent to the evolving specialty area of school health and school nursing practice, as well as meet the continuing education requirements for licensure in the expanded role in Massachusetts.



Responsibilities

The Nurse Practitioner practicing within the school setting is responsible for many of those areas listed in the position description for the school nurse. In addition, her/his role includes:

- consultation and collaboration with a pediatrician, medical specialist in adolescent medicine or other related field in addressing medical issues presented by the students and in developing practice guidelines;
- provision of primary care to students;
- management of the health care of students with chronic and acute conditions while providing intervention and/or referral as necessary;
- provision of physical examinations to identified students at appropriate intervals, including prior to participation in sports, prior to obtaining work permits, etc.
- consultation with teachers on health issues and provision of clinical in-service education as needed.



EXHIBIT 2-9

Sample Position Description

HEALTH EDUCATION AND HUMAN SERVICES COORDINATOR

Scope of Responsibilities

The HEHS Coordinator is responsible for planning, implementing and evaluating the comprehensive health education and human services program in a school district.

Supervision Given

The Health Education and Human Services Coordinator reports to the Assistant Superintendent as defined in her or his position description.

Qualifications

- a Master's degree in education and have a valid license to practice as a Registered Nurse in Massachusetts or have an R.N. with Master's degree in education or public/community health or nursing;
- strong managerial skills;
- experience with coordination of health education programs;
- experience with supervision and administration;
- highly organized, efficient and thorough;
- ability to work independently to achieve goals and responsibilities;
- skilled and experienced in group facilitation and planning with diverse populations;
- demonstrated ability to work effectively with school and agency personnel.

Responsibilities

- administer health-related grants and assist with preparation of health-related grant proposals;
- supervise the implementation of the early childhood through grade 12 health education curriculum;
- facilitate an interdisciplinary team approach to identify and respond effectively to student health issues;
- expand coordination of available health and human services with the school district and the community;
- work with consultants and staff to research and investigate model programs; to assess student health needs; to evaluate comprehensive school health education and human services; and to develop a long-range plan with the goal of significantly reducing participation in high risk behaviors by staff, students, and families, and significantly increasing health promoting behaviors;

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- participate in all surveys, studies, and evaluations on comprehensive school health education and services requested by the MDPH and MDOE;
- participate in community network activities and develop links with appropriate health care providers;
- participate, with appropriate clinical consultation, in the formation and revision of school health policies and procedures;
- prepare and administer school health budget as appropriate;
- oversee comprehensive school health program data collection as appropriate;
- actively participate in School Health Advisory Committee.



CHAPTER 2

EXHIBIT 2-10

SAMPLE FORMAL WRITTEN AGREEMENT WITH EXTERNAL AGENCY

_____ School Department agrees to contract with _____
Agency/Board of Health to provide the following services:

- _____ all required school health services or selected school
- _____ health and human services:
 - _____ mandated immunizations
 - _____ mandated physical examinations and screenings for the following grades:
 - physical examinations, grades:
 - vision screening, grades:
 - hearing screening, grades:
 - scoliosis, grades:
- _____ maintenance of school records
- _____ care of children with special health care needs
- _____ health education
- _____ emergency care planning and provision
- _____ case finding, referral, and follow-up
- _____ health counseling
- _____ tuberculosis screening
- _____ communicable disease control, including prevention, case finding, and follow-up.

The _____ School Department will provide the following services (if applicable):

Staffing. The Agency/Board of Health will provide the following staff:

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<u>Position Category</u>	<u>FTE's</u>
Registered Nurses/Public Health Nurses/School Nurses	_____
School Physician	_____
School Health Assistants or Aides	_____
Dental Hygienist	_____
Vision and Hearing Screeners	_____
Clerical Assistants	_____
Other (Specify:)	_____

Supervision: Supervision will be provided by:

Equipment and Space: The Agency/Board of Health will provide:

The _____ School Department will provide:

Maintenance of Records and Policies Regarding Confidentiality.

Mutual Responsibilities for Coordination and Cooperation: Each agency/board of health/school department will agree to the following:

- Each will appoint one person as liaison.

_____, School Department

_____, _____ Agency/Board of Health

- Regular meetings (2-4 times per year) will be held to evaluate the program, plan for the future, and address any problems that have arisen.

Terms of Agreement: (includes monthly and/or annual reporting of services provided and fees, if any)

Termination of Agreement: The following notice is required prior to termination of the agreement by either party:

Effective Date of Agreement:

Renewal Date:

Signature (Agency/Board of Health)

Signature (School Department)



CHAPTER 2

EXHIBIT 2-11

Sample Menu of Proposed Family Health Center Service

- Infants can receive developmental assessment, growth monitoring, immunizations, and nutrition support, and the benefit of infant car-seat rental programs.
- Preschoolers can obtain early childhood education; health screenings; immunizations; nutrition support; early childhood assessments of physical well-being, and motor, social, and emotional development; and growth monitoring.
- Children and adolescents attending schools with family health centers will benefit from the full array of well-child/well-teen services, as well as the classic school sick bay in which students with minor acute illnesses are monitored, allowing parents to stay at work. They also will benefit from school-wide health promotion services offered jointly by school personnel and FHC staff.
- Parents can receive booster immunizations, flu shots, allergy shots, education about STD/HIV, marital counseling; can participate in parenting workshops, first-aid training, smoking cessation programs, exercise classes, adult remedial reading classes, nutrition workshops; and can join cooperatives to purchase food more economically. They can learn to use otoscopes to assess children for early otitis media. They also can receive information and referral to other services in the community, including child care networks if the school does not have a child care center on site.
- Seniors can be screened for hypertension, diabetes, and hearing loss; participate in lunch programs; and reduce their property taxes through volunteer work.
- Medically fragile and special needs students will be able to receive services provided by FHC professionals and paraprofessionals.
- Simple, routine diagnostic tests such as throat cultures and Pap smears, as well as HIV testing, will be available in the school-based FHC.
- The on-site pharmacies will serve two important functions: filling prescriptions (providing families with "one-stop shopping" for health care), and dispensing the medications that students bring to school and must take during school hours.
- On-site dental clinics will provide basic preventive and restorative oral health care.
- School faculty and staff will benefit from the presence of FHCs on-site. Health risk appraisal, screening, management of minor acute illness, diagnosis and referral for special care, and stress reduction programs will be part of the faculty and staff health benefits package. Absenteeism should decrease with the availability of the FHC services.
- The FHC also will serve as conduits for specialty clinics (sports, cardiac, mammography) periodically held on site.
- Adults who are dependent on public assistance can become family health center paraprofessionals, thus entering a nursing career ladder.

Source: Judith B. Igoe & Beverly P. Giordano, *Expanding School Health Services to Serve Families in the 21st Century*. (Washington, D.C.: American Nurses Publishing, 1992), 36. Reprinted with permission.



EXHIBIT 2-12

SAMPLE CONTENT OUTLINE

Policies and Procedures Manual

1. Purpose of Manual (including plans for review and revision)
2. Philosophy of the School Health Program
3. Program Goals
4. Laws relevant to the School Health Program
5. Organizational Chart
 - a) In school coordination and how it relates to the community
 - b) School Department (and Health Department)
 - c) School Health Services
6. Memorandum of agreement or contract if Board of Health or other agency provides school health services
7. Job Descriptions
 - a) School Nurse and/or School Nurse Practitioner
 - b) Nursing Supervisor
 - c) School Physician
 - d) School Health Assistant
 - e) Vision/Hearing Technician
8. Personnel Policies as they relate to health
9. Professional Development Policies
10. Policies for Health Assessment of Students
 - a) Preschool
 - b) School Entry and Transfer
 - * c) Screenings, e.g., vision, hearing, posture
- * 11. Policies for Prevention and Control of Communicable Diseases
 - a) Immunizations
 - b) Reportable infectious diseases
 - c) Specific school policies, e.g., Pediculosis, Scabies, Ringworm, and impetigo
 - d) Tuberculosis testing for: staff, students and volunteers
 - e) Handwashing as a control measure
 - f) Universal Precautions
 - g) Disposal of medical waste
- * 12. Policies for Provision of Emergency Care, including number of persons required to have first aid training and CPR
13. Policies for the Care of a Sick Child in a Non-Emergency Situation
14. Attendance Policies (including dismissal for health reasons)
 - a) Release or exclusion of student
 - b) Release of students to authorized persons
- * 15. Administration of Medication Policies
16. Special Education Procedures: IEP and IHCP



CHAPTER 2

17. Policies for Management of Students with Chronic Illnesses.
 - a) Asthma
 - b) Diabetes
 - c) Seizure disorders
 - d) AIDS and condom availability
 - e) A.H.D.D. (A.D.D.)
18. Policies for Response to Frequently Encountered Health Problems
 - a) Pregnant Students and School-age Parents
 - b) Child Abuse and Neglect (including reporting)
 - c) Substance Use and Abuse
 - d) Violence (including harassment, date rape, homicide, suicide)
 - e) Eating Disorders and Weight Control
 - f) Mental Health Problems
 - 1) Crisis intervention
 - 2) Suicide prevention
 - 3) Nursing guidelines for depression and suicide intervention
19. Health Counseling Policies, e.g., pregnant and parenting teens
- *20. Physical Education and Sports Policies, e.g. medical recommendation for modified gym
- *21. Policies for Maintenance of Student Health Records
22. Policies for School Nurse-Teacher Conferences
 - a) Annual scheduled conferences for the total school population
 - b) Individual nurse-teacher-parent-student health conference
23. Policies regarding health services for staff; staff wellness
24. Policies for Coordination of School Health Services with Community Resources
25. School Health Education Policies
26. School Food Services
27. Responsibilities Toward a Safe, Healthy School Environment
 - a) Injury Prevention
 - b) Tobacco-free Schools
28. Health Suite
 - a) Literature
 - b) Supplies
 - c) First Aid Kits
 - d) Access
29. Health Services Budget
30. List of Community Resources

* indicates basic policies that require first priority.



EXHIBIT 2-13

Categories of Emergency Injuries and Conditions

Emergencies may be classified into three major categories:

1. **Life-threatening or potentially disabling:** Since they can cause death or disability within minutes, they require immediate intervention, medical care, and usually hospitalization.
2. **Serious or Potentially Life-threatening or potentially disabling:** Because these may soon result in a life threatening situation or may produce permanent damage, they must be treated as soon as possible.
3. **Non-life-threatening:** These are defined as any injury or illness that may affect the general health of a person, for example, fever, stomachache, headache, seizures, broken bones, cuts, etc. The person should be evaluated as soon as parents can be notified or within a few hours at maximum.

In either a life-threatening or potentially disabling situation, follow these general guidelines:

- Don't leave the ill/injured person alone.
- Don't move ill/injured person unless in more danger if left in that location.
- Remain calm.
- Request others leave room quickly and quietly. It is helpful to have a pre-arranged designated area for "all others".
- Activate the local EMS System by calling 911 or the local emergency number (whichever your town has)

When Emergency Services for life-threatening or potentially disabling situations are needed:

- Direct a responsible person to call the Emergency Medical Services (EMS). Their phone number **MUST** be prominently displayed near all phones.
 - Person placing the emergency call **MUST** stay on the phone line until all information is obtained. A good intervention is to have installed an "override" for an extra outside line for emergency use as school lines are often busy.
1. Briefly describe emergency situation (what is wrong).
 2. State name of caller and school and exact address.
 3. Specify exact location within the school of the ill/injured person.
 4. Tell EMS that you will meet them at a specific entrance of the school.



5. State the name of school, address, and phone number of school.
6. Give simple, specific directions.
7. Make sure EMS has all necessary information before hanging up phone.
8. Call back for reassessment if necessary (e.g., person has stopped breathing)

Unless the nature of the illness/injury is minor, it is prudent to activate the local EMS system to respond to the incident. If the injury/illness is later determined to be relatively minor by the school nurse or other trained personnel, the EMS response can be canceled or the EMS units can clear the scene after they evaluate the situation. It is far easier for a school nurse to cancel a responding ambulance than to wait an additional period of time to summon an ambulance and then await its arrival.

In dealing with life-threatening or potentially disabling injuries/illnesses or serious injuries, school personnel should attempt to notify the parent or legal guardian that the ambulance is transporting or has transported the patient to XYZ hospital. The parent should be advised to have someone else drive them to the hospital and reassure the parent that trained EMS personnel are caring for their child. Ideally, it is best to 1) pull child's emergency response card with parents' phone numbers 2) have another designated person call parent while EMS is being activated 3) give emergency card to EMT (it has parents' signatures which may expedite treatment in Emergency Room while waiting for parents to arrive.)

School personnel should not delay calling for an ambulance while awaiting the permission or arrival of a parent in cases of potentially life-threatening or disabling or other potentially serious situations.

The following table displays a list of injuries/conditions requiring emergency treatment, with emergency plan steps to follow for each category of injury/condition. This list is not all-inclusive. *Many situations require a judgment call, but it is prudent to call EMS in any serious incident.*

DEVELOPING AN EFFECTIVE SCHOOL HEALTH PROGRAM



CATEGORY OF INJURY/CONDITION	PROBLEMS REQUIRING THIS TREATMENT	EMERGENCY PLAN STEPS TO FOLLOW
Life-threatening or Potentially disabling. IMMEDIATE Treatment and Mobilization of EMS Needed	• Acute airway obstruction • Cardiac or respiratory arrest • Near drowning • Massive hemorrhage (external & internal) • Severe allergic reaction - anaphylaxis • Choking on food or other objects • Attempted suicide • Poisoning (internal or external) • Severe shock • Penetrating/crushing chest wounds and pneumothorax • Uncontrolled convulsion/seizures • Heat stroke • Chemical burns of the eyes • Major burns • Neck or back injury • Spider/snake bites • Bee/wasp/hornet/yellow-jacket stings with anaphylaxis • Internal bleeding • Coronary occlusion • Fractures and dislocations • Burns with blisters • Drug overdose • Severe abdominal pain/acute projectile vomiting • Severe depression or anxiety • Threatened abortion • Penetrating eye injury • Head injury with loss of consciousness • Puncture wound • Threatened suicide • Seizure - cause unknown	1. Initiate or direct a responsible person to call Emergency Services/911. 2. School nurse or trained staff person MUST immediately attend to the victim. 3. Have someone notify the nurse if she is not with victim. 4. Have someone notify the administrator. 5. Administrator or nurse to notify parent.
Non-Life-threatening Emergencies. Medical Consultation Desirable within an Hour	• Accidental loss of tooth • Lacerations - bleeding controlled • Animal, snake, insect bites and stings (without anaphylaxis) • Acute emotional state • Moderate reaction to drugs • High fever (above 103° F) • Non-penetrating eye injury • Frostbite	1. Contact nurse or, in her absence, administrator. 2. Nurse or trained staff person to assess extent of injury. 3. Notify parent and activate local EMS.
School Nurse/Trained Staff/Parent Consultation Needed	• Convulsion in known epileptic • Insulin reaction in diabetic - if patient is conscious, alert • Intermittent abdominal pain • Fever 100-103° F • Sprains • Fainting	1. Call nurse or trained staff person for assessment. 2. Notify parent and refer to medical facility if necessary.
Minor Injuries/Illnesses - Can be Handled by Trained Staff Person Following Standard Procedures	• Abrasions • Minor burns - no blisters • Nose bleeds - minor, less than 10 minutes	1. Refer student to nurse or trained staff person. Child may remain in school.

Adapted with the permission of the American Academy of Pediatrics (1993) *School Health Policy and Practice*. Elk Grove Village, IL: AAP



Anaphylaxis

Anaphylaxis is one of the most serious and life-threatening emergency situations to which school personnel may have to respond. The American Academy of Pediatrics in *School Health: A Guide for Health Professionals* (1993) defines anaphylaxis as “an allergic reaction that may be triggered by an insect bite, a drug allergy, or a food allergy.” This generalized whole-body allergic reaction requires prompt intervention, proper management, and prompt transportation to an appropriate health care facility. Anaphylaxis is **always** an emergency. Appropriate intervention usually results in an effective “cure,” while a delayed intervention can be fatal. A chart posted in the main office for staff and the health office for health providers, which also includes emergency procedures for diabetes, epilepsy and asthma emergencies, is important.

A person may exhibit any or all of the following signs and symptoms within a short time (within five minutes), or the reaction may be delayed for several hours. **If a person is known to have a severe sensitivity and severe allergic reactions, don’t wait for signs and symptoms to become worse. Call for an ambulance as soon as possible.**

Signs and Symptoms of Anaphylaxis May Include Any or All of the Following:

Skin:	cold to touch, may be clammy and moist, itching, hives, swelling of lips
Color:	pale at first, then mottled or bluish
Respiration:	wheezy, change in voice quality due to swelling of larynx, feeling of fullness in throat, breathing may cease
Pulse:	rapid, weak
Blood Pressure:	low, progressively lower, or unattainable
Other:	restlessness, severe headache, nausea, vomiting, diarrhea, loss of consciousness, swelling of eye lids

Observing signs of breathing and pulse

The presence or absence of respirations and/or a pulse is important for a proper EMS response. For example, EMS would send a basic life support EMT staffed ambulance for a person with a back injury versus a police, fire, basic EMT and an EMT-Paramedic unit response for a person not breathing, or with no pulse. However, the priority is to call EMS whenever a situation is serious.

Levels of Consciousness

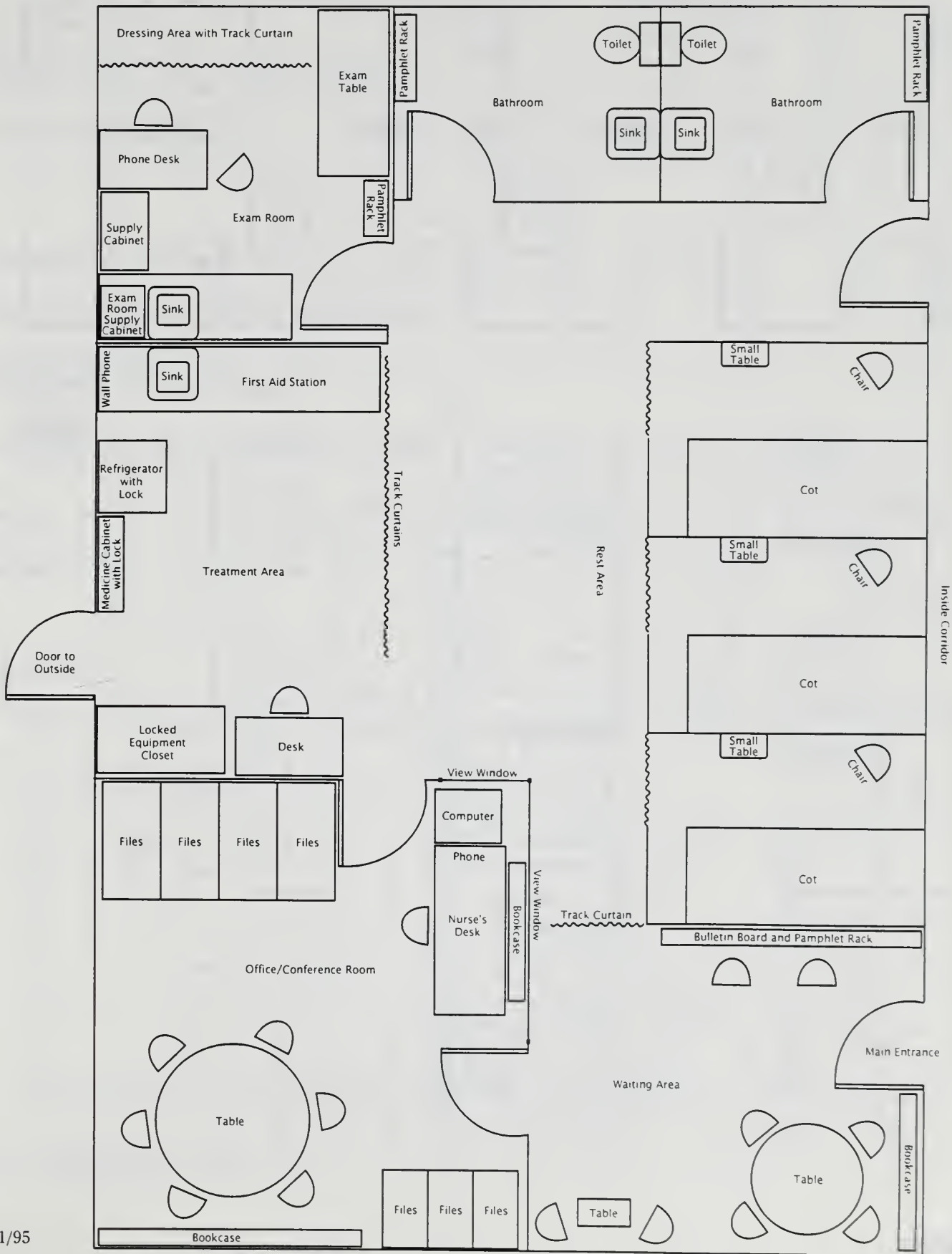
The four major levels of consciousness of the patient is useful information for the EMS units.

Alert	Patient converses freely. Knows their name, date, location, time, what happened. Initiates conversation, asks questions, etc.
Verbal	Patient only responds to questions or commands. Does not initiate conversations or ask questions.
Painful	Responds appropriately to physical stimuli. May be conscious or unconscious at this stage.
Unresponsive	Does not respond to physical stimuli. <i>Get EMS there immediately.</i>



EXHIBIT 2-14

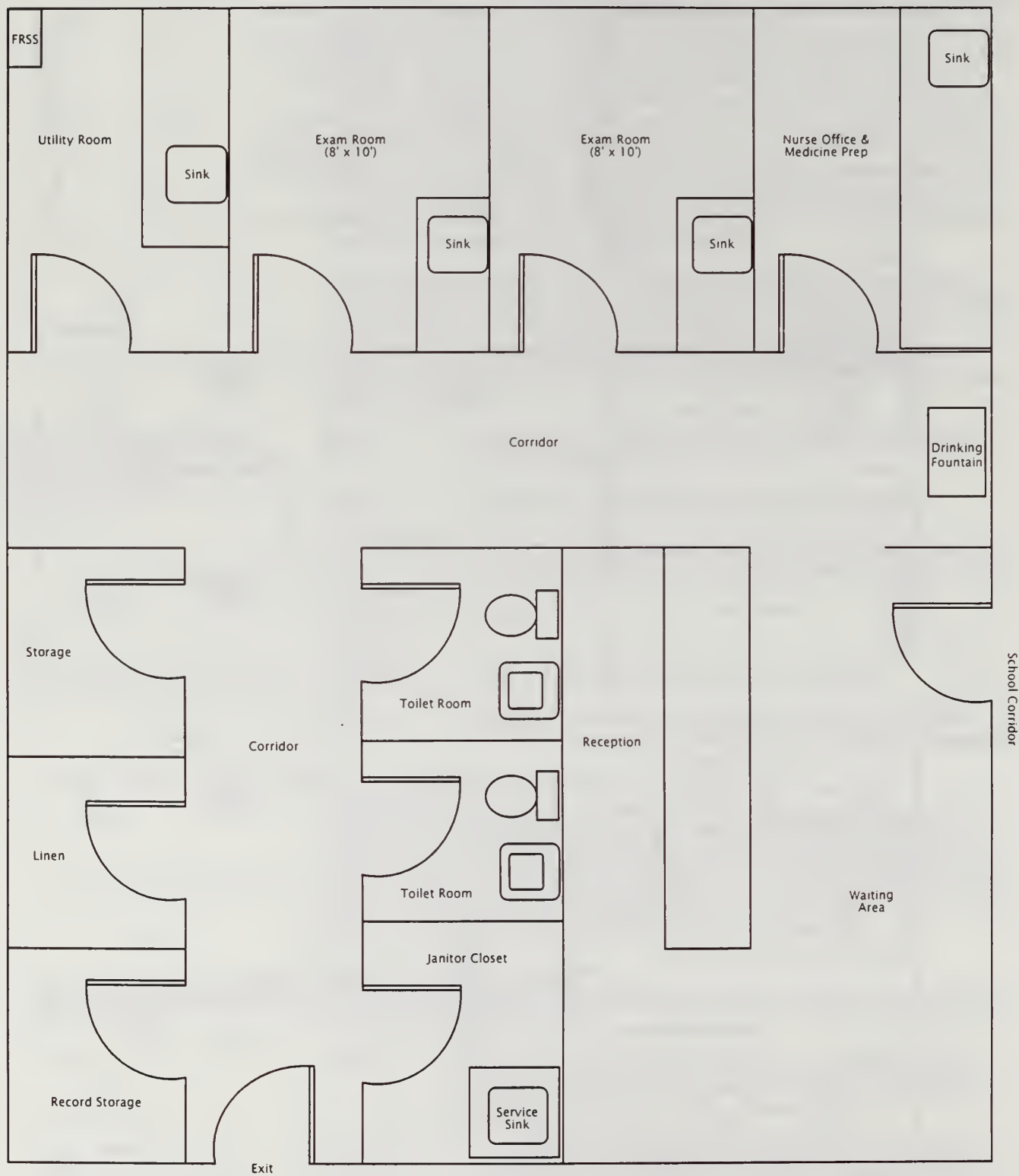
Sample Floor Plan for School Health Suite





CHAPTER 2

Sample Floor Plan for School-Based Health Center



MASSACHUSETTS SCHOOL HEALTH RECORD

NAME				SEX	BIRTH PLACE	BIRTH DATE
Last		First	Middle	Primary home Language		
FATHER			Employer	Phone		
MOTHER			Employer	Phone		
GUARDIAN	is:	Father	Mother	OTHER (name and address)		
ADDRESS (street and town)			HOME TEL. NO.	SCHOOL		
IN EMERGENCY, notify (name, address and tel. no.)						
REGULAR SOURCE OF MEDICAL CARE (name, address and tel. no.)						
REGULAR SOURCE OF DENTAL CARE						
PERTINENT FAMILY DATA (Social, Economic, etc.)						

[illegible]

NAME _____

MEDICAL HISTORY (give dates)

Accidents	Ear Infections	Measles	Scarlet Fever
Allergy	Encephalitis	Meningitis	Strep. Throat
Chicken Pox	German Measles	Mumps	Tonsillitis
Congenital Anomaly	Heart Disease	Operations	Tuberculosis
Convulsions	Hernia	Poliomyelitis	Whooping Cough
Diabetes	Kidney Disease	Rheumatic Fever	Other

PERTINENT FAMILY MEDICAL HISTORY

PHYSICIAN'S EXAMINATION

Date _____ (O) Normal (X) Abnormal (Comment. Specify consultation requested)

Age BP / Pulse Hgt. Wgt.

Physical Development

Nutritional Status

Skin

Eyes sclera pupils light & distance: r. l. glasses

Ears canals: r. l.

drums: r. l.

Nose septum turbinates

Mouth lips tongue pharynx

Teeth gingiva

Neck mobility lymph nodes thyroid

Throat shape symmetry

Lungs

Heart rate rhythm murmur

Abdomen liver spleen hernias

Ano-Genital anus penis testicles: r. l.

labia

Spine

Lower Extremities range of motion development strength

Upper Extremities range of motion development strength

Cranial Nerve I-XII Gait Coordination

M.D.

Signature

EXHIBIT 2-17

SCHOOL HEALTH RECORD (cont.)

Page 3

NAME

[illegible]

[illegible]

EXHIBIT 2-18

MASSACHUSETTS SCHOOL HEALTH RECORD PRIVATE PHYSICIAN'S EXAMINATION

Child's Name _____ Sex _____ Birth Date _____

Address _____ School _____

IMMUNIZATION	Date	IMMUNIZATION	Date	IMMUNIZATION	Date	SPECIAL TESTS	
DTP (Diphtheria Tetanus Pertussis)		POLIO Oral Trivalent (TOPV)		MMR (combined)		TUBERCULIN TEST	
					Results	Date	
			TETANUS TOXOID				
			OTHER IMMUNIZATION				
Td (Tetanus Diphtheria)		MEASLES				LEAD TEST	
Adult Type		MUMPS					
		RUBELLA					

MEDICAL HISTORY (give dates)

Accidents	Ear Infections	Measles	Scarlet Fever
Allergy	Encephalitis	Meningitis	Strep. Throat
Chicken Pox	Rubella	Mumps	Tonsillitis
Congenital Anomaly	Heart Disease	Operations	Tuberculosis
Convulsions	Hernia	Poliomyelitis	Whooping Cough
Diabetes	Kidney Disease	Rheumatic Fever	Other

PERTINENT FAMILY MEDICAL HISTORY

SUMMARY OF SIGNIFICANT TREATMENT PROGRAMS INCLUDING CURRENT MEDICATIONS, AND SUGGESTIONS FOR PROGRAM ADJUSTMENT IF INDICATED

RECORD APPROVED BY DEPARTMENT OF EDUCATION AND THE MASS. DEPT. OF PUBLIC HEALTH

NOTE: Clip or staple this record to cumulative school health record.
FORM PH-M-18 (Rev. 1983)-350M-6/84-178653

PRIVATE PHYSICIAN'S EXAMINATION

In order to ensure a quality standard of complete examination for each school child, please record your findings after each item

(O) normal (X) abnormal

DATE

Comment

Treatment

Age BP / Pulse Hgt. Wgt.

Physical Development

Nutritional Status

Skin

Eyes sclera pupils

light & distance: r. l.

glasses

Ears canals: r. l.

drums: r. l.

Nose septum turbinates

Mouth lips tongue pharynx

Teeth gingiva

Neck mobility lymph nodes thyroid

Throat shape symmetry

Lungs

Heart rate rhythm murmur

Abdomen liver spleen

hernias

Ano-Genital anus penis labia

testicles: r. l.

Tanner stage:

Spine

Lower Extremities range of motion

development strength

Upper Extremities range of motion

development strength

Cranial Nerve I-XII

Gait

Coordination

Lab Tests

Hgb/Hct

Other:

Address

Date

Signature

M

EXHIBIT 2-19

MASSACHUSETTS SCHOOL HEALTH RECORD

PRIVATE PHYSICIAN'S EXAMINATION - Subsequent Evaluations Only

To Physician/Practitioner:

Please note that your initial school examination of the child should be recorded on the prescribed itemized form (PH-M-18). This abbreviated form is to be used only for follow up or subsequent examinations.

Student's Name: _____

Address: _____

Date of Birth: _____ School: _____

Date of last complete physical exam: _____ Hgt. _____ Wgt. _____

Significant Findings: _____ Blood Pressure: _____ / _____

Hct. or Hgb.: _____

Other Lab.: _____

TB Test: _____

Significant illness or injuries since last report:

General estimate of health:

Immunization Boosters (give exact date):

DTP: _____ Other: _____

Td: _____

TCPV: _____

Medication or treatment orders to be carried out at school:

Restrictions on sports participation or recommended modifications to school program:

Other Comments:

Signature, Examining Physician, Nurse Practitioner _____ (Date) _____

Name & Address (Please print): _____ Telephone _____

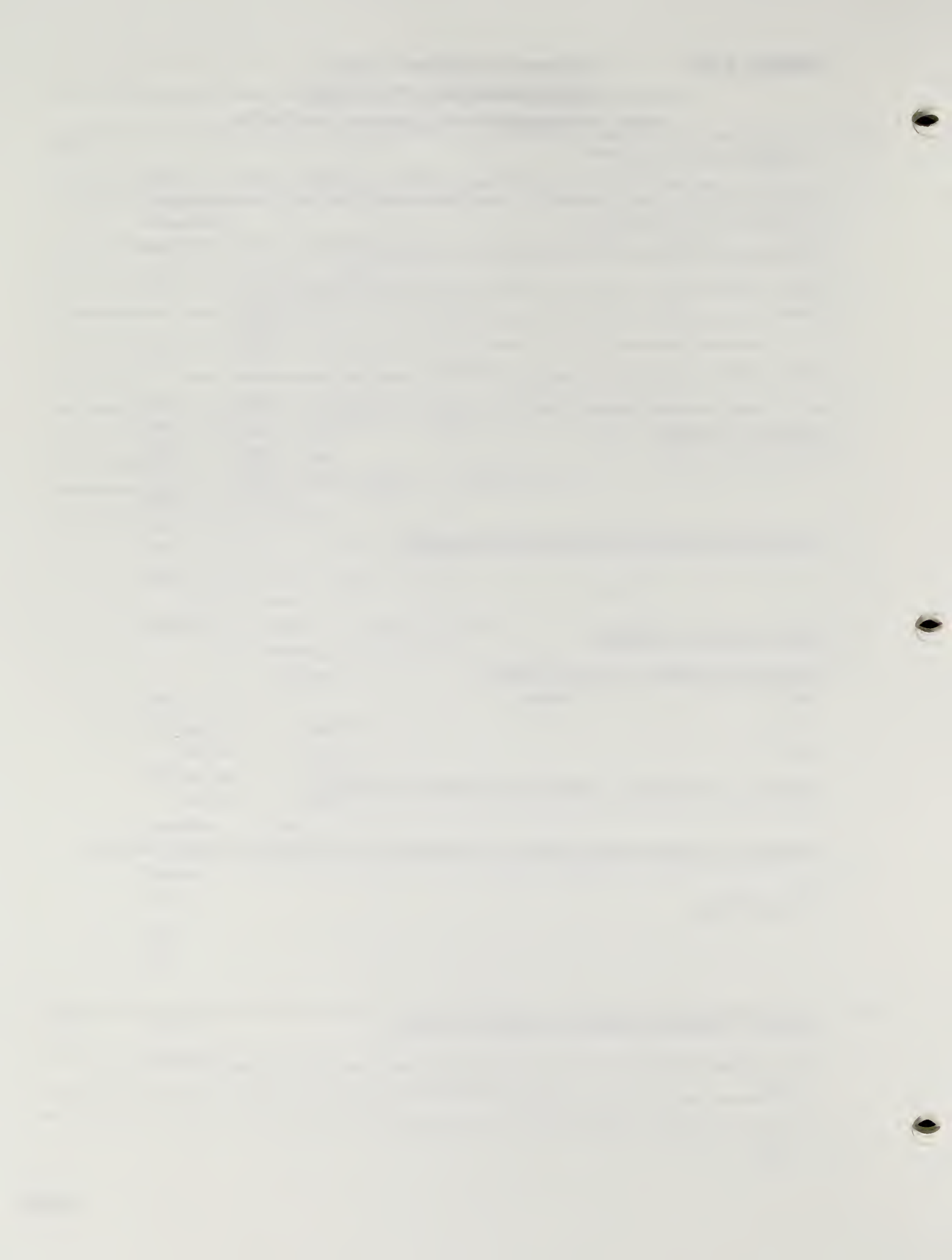




EXHIBIT 2-20

The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC HEALTH—DEPARTMENT OF EDUCATION



NOTICE TO PARENT OR GUARDIAN IN ACCORDANCE WITH CHAPTER 71, SECTION 56, GENERAL LAWS YOU ARE HEREBY NOTIFIED THAT:

GRADE _____
HAS BEEN EXAMINED AND HAS BEEN FOUND TO NEED PROMPT AND COMPETENT PROFESSIONAL ADVICE IN RESPECT TO THE CONDITION INDICATED BELOW.

Date

SIGNATURE

The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC HEALTH—DEPARTMENT OF EDUCATION



PARENT'S SLIP

PLEASE INDICATE BELOW WHAT YOU PLAN TO DO AND IMMEDIATELY RETURN SLIP TO SCHOOL.

ACTION ON HEALTH CONDITION OF GRADE

1. I WILL CONSULT MY FAMILY

DOCTOR.

2. I WILL TAKE MY CHILD TO A CLINIC.

DENTIST.

3. I WOULD LIKE HELP IN DECIDING WHAT TO DO.

Date

PARENT'S SIGNATURE

The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC HEALTH—DEPARTMENT OF EDUCATION



PHYSICIAN'S CERTIFICATE

TAKE THIS SLIP TO THE DOCTOR OR CLINIC AND RETURN TO THE SCHOOL AFTER IT HAS BEEN CHECKED AND SIGNED.

GRADE
(NAME OF CHILD)

1. UNDER CARE.

2. NO TREATMENT INDICATED.

DATE

SIGNED M.D.

FORM PH-M-14, 100M-8/86-504964



CHAPTER 2

EXHIBIT 2-21

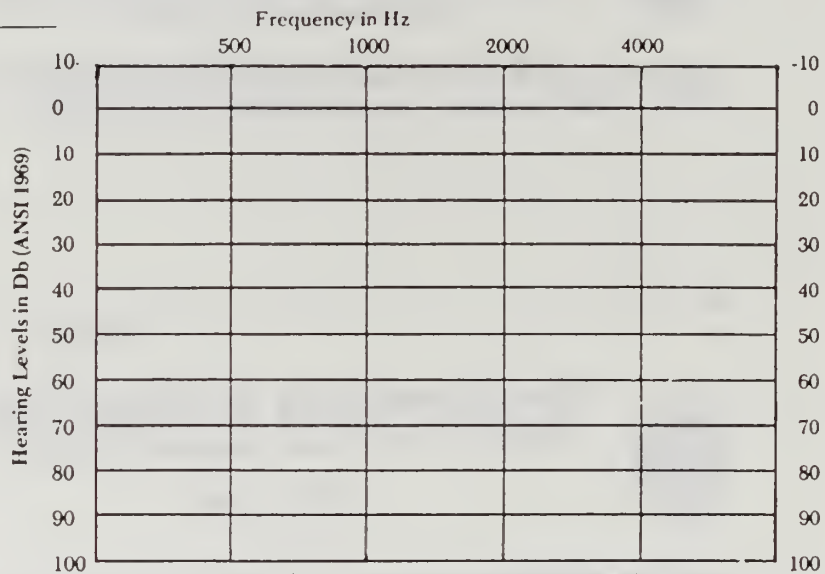
Name _____ **AUDIOGRAM** Date _____
School _____ Town _____
Grade _____

Legend:

O = Right Ear

X = Left Ear

(These are not
threshold levels.)



PH-M-31A-100M-6/84-178654

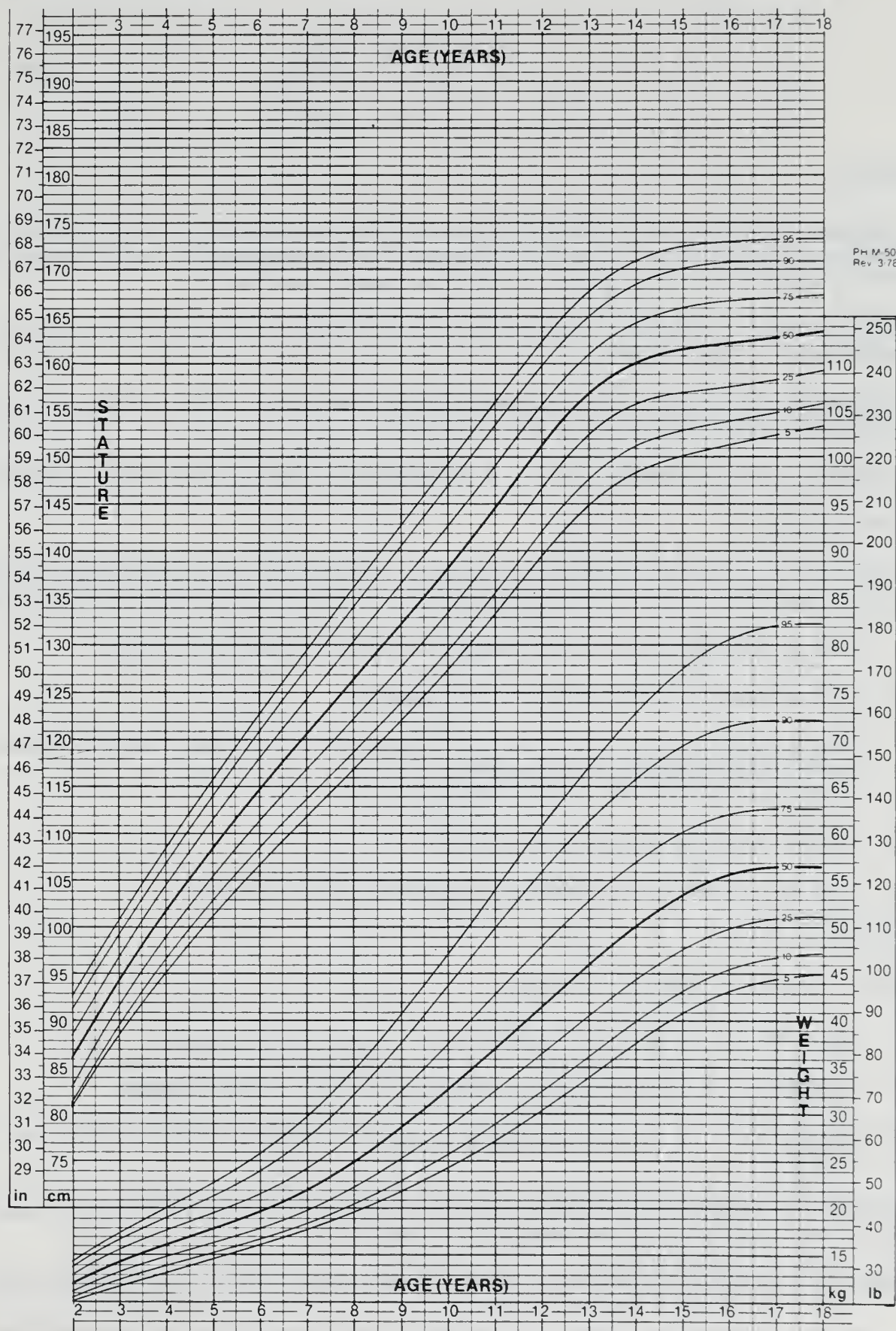
Massachusetts Department of Public Health
Division of Family Health Services

**GIRLS: 2 TO 18 YEARS
PHYSICAL GROWTH
NCHS PERCENTILES***

EXHIBIT 2-22

NAME _____

RECORD # _____



* Adapted from: National Center for Health Statistics: NCHS Growth Charts, 1976, Monthly Vital Statistics Report, Vol. 25, No. 3, Supp. (HRA) 76-1120. Health Resources Administration, Rockville, Maryland, June, 1976. Data from the National Center for Health Statistics.

1976 ROSS LABORATORIES

Name:

Birthdate:

PURPOSE

This height and weight graph provides a standardized measure for the determination of percentile rank of girls at a given age. The Harvard—Iowa standard is based upon repeated growth measurements at selected ages of a group of white children living in and around Boston, Massachusetts.

While the pattern or sequence of development is the same in all children, the rate of growth and maturation may vary from child to child.

With normal growth a healthy child is expected to attain and maintain a given consistent percentile in both height and weight. (50% — 50% or 25% —25%, etc.)

Recording of the child's measurements on the chart provides a clear picture of her growth pattern.

INSTRUCTIONS

Growth charts may be used for all school children on whom height and weight are regularly measured but are particularly important for those children exhibiting any sign of size or nutritional abnormality.

1. Each child should be weighed and measured with clothes on but without shoes.
2. Take recumbent length on children under 5 years old.
3. Take standing height on children over 5 years of age making sure that heels, buttocks and occiput are touching the vertical measuring surface.
(Eyes should be horizontal and heels held together.)
4. Use the appropriate chart for boys or girls.
5. Take serial measurements as often as 3 or 6 months on high risk children.

INTERPRETATIONS

Medical referral is indicated on the following:

1. any child that falls below the 3rd percentile or above the 97th percentile
2. any child with a marked discrepancy between percentiles in height and weight
3. any child with failure to show progression in height and weight or to show excessive gain or loss in weight.

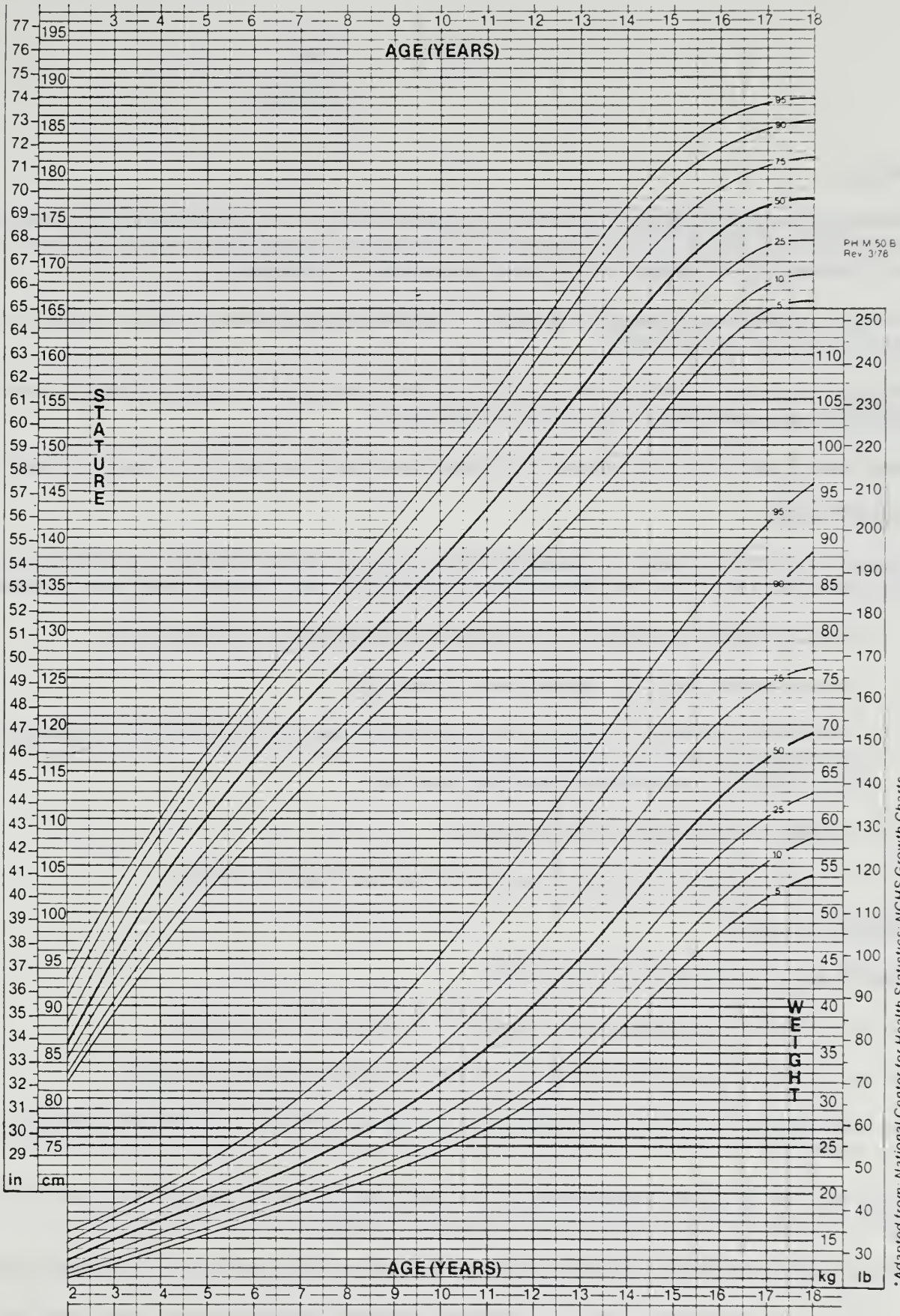
Because of the variations in the pubertal growth spurt (age of maximum growth during adolescence) from child to child, the norms for children over 13 yrs. are less reliable.

Deviation from the child's established pattern of growth may be an early sign of underlying illness.

**BOYS: 2 TO 18 YEARS
PHYSICAL GROWTH
NCHS PERCENTILES***

NAME _____

RECORD # _____



*Adapted from: National Center for Health Statistics: NCHS Growth Charts,
1976. Monthly Vital Statistics Report, Vol. 25, No. 3, Supp. (HRA) 76-1120.
Health Resources Administration, Rockville, Maryland, June, 1976.
Data from the National Center for Health Statistics
1976 POSS LABORATORIES

Name:

Birthdate:

PURPOSE

This height and weight graph provides a standardized measure for the determination of percentile rank of boys at a given age. The Harvard—Iowa standard is based upon repeated growth measurements at selected ages of a group of white children living in and around Boston, Massachusetts.

While the pattern or sequence of development is the same in all children, the rate of growth and maturation may vary from child to child.

With normal growth a healthy child is expected to attain and maintain a given consistent percentile in both height and weight. (50% — 50% or 25% — 25%, etc.)

Recording of the child's measurements on the chart provides a clear picture of his growth pattern.

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1. Each child should be weighed and measured with clothes on but without shoes.
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(Eyes should be horizontal and heels held together.)
4. Use the appropriate chart for boys or girls.
5. Take serial measurements as often as 3 or 6 months on high risk children.

INTERPRETATIONS

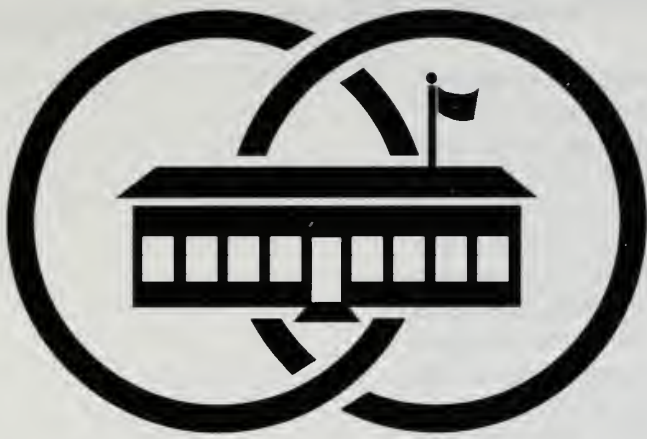
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1. any child that falls below the 3rd percentile or above the 97th percentile
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3. any child with failure to show progression in height and weight or to show excessive gain or loss in weight.

Because of the variations in the pubertal growth spurt (age of maximum growth during adolescence) from child to child, the norms for children over 13 yrs. are less reliable.

Deviation from the child's established pattern of growth may be an early sign of underlying illness.

*Reproduced with the permission of the Dept. of Maternal and Child Health, Harvard School of Public Health, Boston, Mass.



Chapter 3

HEALTH EDUCATION CURRICULUM

CSHE Curriculum Content

Massachusetts Law and Health Education

Selecting CSHE Curriculum

Training for Curriculum Implementation



2. 10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10

10/10/10



The centerpiece of a comprehensive school health education (CSHE) program is a documented, planned, and sequential health education curriculum for students in grades prekindergarten through 12. A high-quality curriculum is developmentally appropriate and based on students' needs, focuses on emerging health concepts and issues, and current research on effective health practices. CSHE curricula assist students in acquiring the knowledge and skills that promote decisions leading them to adopt healthy behaviors. CHSE integrates the physical, mental, emotional, and social dimensions of healthy development. Health education curricula and health services need to be provided in a context that respects the cultural diversity of the student population.

The purpose of a CSHE curriculum is to provide ongoing learning opportunities designed to maximize the prospect that each student will make health-enhancing decisions throughout life. Thus, CSHE curricula are designed to promote wellness, as well as to prevent disease and disability.

A CSHE curriculum is an integral part of an overall program, defined in Massachusetts as a comprehensive school health and human services program. Such a program consists of an organized set of policies, procedures, and activities designed to protect and promote the health and well-being of students and staff. It incorporates health education, health services, the physical and social environment, guidance and support services, food service program, physical education, school and worksite health promotion, and integrated school and community health promotion.

A comprehensive curriculum is an interrelated set of age-appropriate and culturally relevant activities addressing:

- Health-related *knowledge*.
- Student *attitudes* toward health risks, such as attitudes about personal behavior choices or society's response to health issues.
- Student *skill-building* that leads to decreased health-risk behaviors and increased health-promoting behaviors.

CSHE CURRICULUM

A typical CSHE curriculum incorporates, but is not limited to, twelve major topics:

1. Personal health habits

Exercise

Nutrition

Oral health

Personal hygiene

How hygiene changes as one grows

Personal responsibility for health



Relationship between behavior and health consequences

2. Human growth and development

Cognitive, emotional, mental, and physical development

Body structure and function

Mental health

Relationship of emotional and physical health

Understanding one's own growth and development

Stages of childhood, adolescence, and adulthood

Reproductive health

Accessing support services

3. Family life and mental health

The student's role in the family

Creating and sustaining healthy families

Social skills

4. Sexuality and reproductive health

Anatomy

Disease prevention skills

Decision making and peer pressure

Reproductive systems and reproductive health

Sexual orientation

Sex role stereotypes

5. Substance use and abuse prevention

Alcohol, tobacco, illegal drugs, over-the-counter and prescription drugs

Stages of use

Health and social behavioral effects

Nature of addiction

Peer pressure, resistance and refusal skills

Media influences

6. Nutritional health

Nutrition, growth, development, and exercise

Dietary Guidelines for Americans

Eating patterns (societal, family, cultural, environmental, media influences) and eating disorders

Nutrition intake patterns and chronic disease

Consumer skills: food selection, preparation and safety



7. Injury prevention and safety

Intentional and unintentional injury prevention

Suicide prevention

Interpersonal violence, physical and sexual abuse, self-inflicted injury

Relationship between substance abuse and accidents

First aid

Disaster procedures

8. Violence prevention

Weapons

Rules of school

Expressing and controlling anger and hostility

Conflict resolution

Media and violence

Family violence and abuse

9. Prevention and control of disease

Distinction between disease and illness

Definition of various kinds of diseases and their causes

Behavior and choices that prevent diseases

Childhood diseases

Cancer and heart disease

Sexually transmitted diseases, HIV/AIDS, hepatitis B, bloodborne illness

Facilitating HIV/AIDS education in schools

Integrating HIV/AIDS education into diverse subject matter

Age-appropriate teaching strategies for HIV/AIDS

Facilitating the discussion of HIV/AIDS

Sensitivity to cultural, gender, and age differences in discussing HIV/AIDS

Education for school personnel on HIV/AIDS

10. Community health

Health resources and prevention in the community

Public policies regarding health

Community health hazards

11. Environmental health

Macro level: Relationship between ecology and personal health such as cancer and the environment and the effect of health hazards, pollution, air and water quality control



CHAPTER 3

Micro level: Creating a healthy environment at home or at school through making it childproof and safe, availability of healthy food snacks, lead and asbestos removal, radon testing, safe windows and screens, swimming pools, etc.

12. Consumer health

Choosing health care

Talking with a health care provider

Different approaches to health care

Personal preventive health care

Health care costs and financing

Exhibit 3-1 is a sample scope and sequence chart with these 12 topics. Exhibit 3-2 illustrates how nutrition would be taught across grade levels and the subject areas that would be taught to 2nd graders.

THE MASSACHUSETTS LAW AND HEALTH EDUCATION

The legal basis for health education in Massachusetts Public Schools is M.G.L. c. 71, s. 1. (The latest amendment is the Education Reform Act of 1993.) The implementation of health education requirements is the responsibility of the Department of Education and local school districts. Although this statute lists health education curriculum topics in some detail, there are no hour, topic, or grade-level requirements at the state level for health education. As a result, there is great variation among districts in the level of curriculum implementation.

The Education Reform Act of 1993 directs the Department of Education to implement a statewide program of comprehensive school health education programs. Funds are available through the Health Protection Fund administered by the MDOE.

In 1994, MDOE developed Health Education Curriculum Frameworks available for school use. These frameworks which provide guidelines to schools for developing and evaluating their K-12 health education curricula describe the basic concepts of comprehensive school health education, such as teaching and learning strategies, assessment issues, and the relationship between curriculum and education reform. While the curriculum frameworks are being finalized, school districts may wish to consult this chart in Exhibit 3-1.

The MDOE defined the major elements that support a comprehensive school health education curriculum, as displayed in the following chart.



ELEMENTS OF A COMPREHENSIVE SCHOOL HEALTH EDUCATION CURRICULUM

1. A documented, planned, and sequential program of health education for students in grades prekindergarten through 12
2. A curriculum that addresses and integrates education about a range of categorical health problems and issues (e.g., HIV infection, drug abuse, drinking and driving, emotional health, environmental pollution) at developmentally appropriate ages
3. Activities to help young people develop the skills they will need in order to avoid:
 - Behaviors that result in unintentional and intentional injuries
 - Drug- and alcohol-related problems
 - Tobacco use
 - Sexual behaviors that result in HIV infection, other sexually transmitted diseases, and unintended pregnancies
 - Imprudent dietary patterns
 - Inadequate physical activity
4. Instruction provided for a prescribed amount of time at each grade level
5. Management and coordination in each school by an education professional trained to implement the program
6. Instruction from teachers who have been trained to teach the subject
7. Involvement of school nurses, parents, health professionals, and other concerned community members
8. Periodic evaluation, updating, and improvement

Source: Massachusetts Department of Education, 1994

SELECTING CSHE CURRICULUM

Classroom-based health education is a key component of a school-based comprehensive primary prevention program. Health education curricula are designed to equip most students with the knowledge, attitudes, and skills needed to make healthy decisions. Implementing health education activities in the classroom may also help to identify students who may be affected by various health-related problems. Students may also identify and refer themselves for support services.

Education and public health research sponsored by the American School Health Association and various federal agencies has established that in order to promote healthy decisions



among students, the classroom approach should be behaviorally based as well as knowledge based. A central objective of a behaviorally-based approach is to affect student behavior through:

- Practice of skill-building strategies as they relate to health issues.
- Large and small group discussion.
- Interactive activities.
- Heterogeneous grouping.
- Cooperative learning.
- Peer education.
- Alternative assessment, such as portfolio assessment.

At the elementary and middle school levels, it may be desirable to integrate health education into other subject areas if the teacher is trained in interdisciplinary teaching skills.

Team Approach

The development of a comprehensive interdisciplinary curriculum should involve the entire school system and community. A curriculum planning team of a workable size of not more than 15 people is suggested, including health education specialists, curriculum specialists, school nurses, home economics and physical education teachers, school administrators, school counselors, parents, school food service professionals, students, and representatives from community agencies.

The team develops realistic and attainable goals, develops curriculum review criteria, determines how the curriculum will fit into the overall comprehensive health program, and researches curricula being used by other districts. It acts in an advisory capacity to the school system, whose officials receive its recommendations and make final decisions.

Local Responsibility

MDOE provides guidelines, "Health Education Curriculum Frameworks", to school districts, which have the responsibility to establish local goals and objectives and select specific curriculum materials using "Frameworks" as a guide. School districts may select a variety of options for a K-12 grade comprehensive health education program covering a variety of health issues. Some curricula are targeted for specific age groups (e.g., K-3, young adolescence), and others focus on specific health issues (e.g., HIV/AIDS; teenage pregnancy; alcohol, tobacco, and other drugs).

Local schools may use questions such as the following, from *Criteria for Comprehensive Health Education Curricula*, to help them select curriculum materials or design their own:

- What are the goals and objectives? Are they realistic and well defined?
- What is the content or subject matter of the curriculum?
- What different teaching strategies are used?
- What types of learning activities for students are included?



- What types of materials are part of the curricular package?
- How much time is devoted to implementing the curriculum?
- What type of evaluation or student assessment is included?
- Do the materials reflect cultural diversity and equity?
- Do the materials have a balance of gender roles?
- Are there any additional district-specific criteria?
- Is there evidence of research-based evaluation on the effectiveness of the curriculum?
- What is the relationship between the curriculum and general education reform efforts?

Sources for CSHE curricula are listed in the **Resources** section at the end of this chapter.

TRAINING FOR CURRICULUM IMPLEMENTATION

Implementation of a health education curriculum should be linked with the identification and referral system established by the local school district. The training of teachers and other school personnel in health education curriculum is vital. The success of any curriculum depends on teachers' being trained to teach *that* curriculum in their classroom. Furthermore, the teachers' adherence to the curriculum increases effectiveness.

To introduce the curriculum to teachers, the school is advised to hold a series of workshops to familiarize staff with the health issues and teaching methodologies. *Awareness sessions*, usually 1–1½ hours long, provide information about general health issues and approaches to teaching and often stimulate interest in additional training. *Education workshops* offer opportunities to increase knowledge, sensitivity, and understanding of various health issues depending on one's previous knowledge base. Workshops, usually 2–6 hours long, provide basic information about a particular topic or consist of an in-depth review or follow-up.

Comprehensive training prepares teachers to implement health education curricula in their classrooms. Training is usually 18–30 hours long and focuses on in-depth information, practice exercises and skill building, attitudes regarding the material, and comfort level in working with sensitive issues. High-quality behaviorally-based health education curricula use interactive cooperative learning and skills-focused exercises in imparting healthy behavior messages. Many teachers who have participated in training sessions and have implemented the curricula within the classroom setting have reported indirect benefits for classroom management.

One anticipated outcome of health education is that children with health needs may self-disclose to the teacher, who can then refer them to the school's student assistance, support service, or school health program. The teacher is not expected to (and should not) take on the role of counselor or medical professional. Rather, training provides teachers with information about how to link into the school's identification and referral system.



CHAPTER 3

Many school-based prevention programs involve parents, youth leaders, and community agency or health service personnel in the implementation of health education curricula. Parent volunteers can serve as co-trainers and facilitators working with the classroom teacher. Some of the most successful elementary and middle school health education programs involve trained high school peer leaders who conduct classroom health education activities. Representatives from community agencies and local health provider agencies may also participate as guest speakers to augment the teacher-led health education classroom activities.

REFERENCES

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- HIV and AIDS Education Planning Guide for PTA Leaders*. (1992).
- Kane, W.M. (1993). *Step by Step to Comprehensive School Health. The Program Planning Guide*. Santa Cruz, CA: ETR Associates.
- Massachusetts Department of Education (1994). *Elements of a Comprehensive School Health Education Curriculum*. Learning Support Services Cluster, Health Protection Fund Program. Malden, MA: MDOE.
- U.S. Department of Health and Human Services, Public Health Service (1990). *Healthy People 2000, National Health Promotion and Disease Prevention Objectives*. DHHS Publication No. (PHS) 91-50212. Washington, DC: Author.

RESOURCES

General Health Education Curricula

- Contemporary Health Series: *Into Adolescence*, for grades 6–8, and *Entering Adulthood*, for grades 9–12
ETR Associates
P.O. Box 1830
Santa Cruz, CA 95061-1830
(800) 321-4407
- Great Body Shop*, for grades K–6
Children's Health Market
P.O. Box 7294
Wilton, CT 06897
(800) 782-7077, (800) 780-4116
- Growing Healthy*, for grades K–6
National Center for Health Education
72 Spring St., Suite 208
New York, NY 10012
(212) 334-9470
- Health: 9A Wellness Approach*, for grades 9–12
Glencoe Order Department
P.O. Box 543
Blacklick, OH 43004-0543
(800) 334-7344



Health Skills for Life, for grades K-12

Health Skills for Life
P.O. Box 22936
Eugene, OR 97402
(503) 484-2601

Here's Looking at You 2000, for grades K-12

Comprehensive Health Education Foundation
22323 Pacific Highway South
Seattle, WA 98198
(206) 824-2907

Know Your Body, for grades K-6

American Health Foundation
320 East 43d Street
New York, NY 10017
(212) 953-1900

Michigan Model for Comprehensive School Health Education, for grades K-8

State of Michigan
Department of Education, School Program Services
Comprehensive School Health Unit
P.O. Box 30008
Lansing, MI 48909
(517) 342-2480

Partners for Health, for grades K-8

Focus in Education/Partners for Health
P.O. Box 308
Lennon, MI 48449
(800) 998-1001

Teenage Health Teaching Modules, for grades 7-12

Education Development Center
55 Chapel Street
Newton, MA 02160
(800) 225-4276, (617) 969-7100

AIDS

Peer Leadership Preventing AIDS, for grades 7-12.

Medical Foundation
95 Berkeley Street
Boston, MA 02116
(617) 451-0049

Curriculum Guidelines on HIV/AIDS, for grades K-12.

AIDS Bureau
Massachusetts Department of Public Health
150 Tremont Street
Boston, MA 02111
(617) 727-0368

Injury Prevention

SAFE SCHOOLS, for grades K-6, and *SAFETEEN*, for grades 7-12.

Injury Prevention and Control Program
Massachusetts Department of Public Health
150 Tremont Street, 3d floor
Boston, MA 02111
(617) 727-1246



CHAPTER 3

Nutritional Health

In alliance with several agencies and organizations, the MDOE Programs and Services distributes some of the following prepackaged nutrition education programs to schools:

Food... Early Choices.

Food Helps Me Grow, grade 1.

Food Gives Me Energy, grade 2.

Food Keeps Me Healthy, grade 3.

Food in America, grade 4.

Food and Technology, grade 5.

Food Decisions, grade 6.

New England Dairy & Food Council

1034 Commonwealth Avenue

Boston, MA 02215

(617) 734-6750

From Cornell University:

Nutrition Comes Alive, grades K-6.

Nutrition for Life, grades 7-8.

Fit is It!, grades 9-12.

A Smart Start, grades 9-12.

Now, You're Cooking, grades 9-12.

Health Education Services (for Cornell University)

P.O. Box 7126

Albany, NY 12224

(518) 439-7286

Oral Health

Smile, for grades K-6

Dental Health Program

New Jersey Department of Health

CN 364

Trenton, NJ 08625-0364

(609) 292-1723

Rabies

Rabies Curriculum, for grades 1-12

Division of Epidemiology

Massachusetts Department of Public Health

305 South Street

Jamaica Plain, MA 02130

(617) 522-3700, x 420

Sexuality and Reproductive Health

Abstinence-based curricula

Get Real About AIDS

Comprehensive Health Education Foundation

22323 Pacific Highway South

Seattle, WA 98198

(800) 323-2433

Be Proud! Be Responsible!

Comprehensive School Health Education Network

Education Development Center

55 Chapel Street

Newton, MA 02158

(617) 969-7100



or

Select Media, Inc.
225 Lafayette Street, Suite 303
New York, NY 10013
(800) 243-4533 (outside N.Y. state)

Reducing the Risk
ETR Associates
P.O. Box 1830
Santa Cruz, CA 95061
(800) 321-4407

Substance Use and Abuse Prevention

Road Rap
Krooz Controlled: A Campaign to Prevent Underage Drinking and Driving, for grades 9–12.
Arbella Mutual Insurance
P.O. Box 55
Quincy, MA 02269
(617) 328-2468

Tobacco

A Curriculum for Secondhand Smoke, for grades 6–9.
American Nonsmokers' Rights Foundation
Lawrence Hall of Science
University of California, Berkeley
2054 University Avenue, Suite 500
Berkeley, CA 94704
(415) 841-3032

Project PATH. Program to Advance Teen Health: A Comprehensive Anti-Tobacco Curriculum, for grades 6–12.
Independent Video Services 401 East 10th Avenue,
Suite 160 Eugene, OR 97401
(800) 678-3455

Smoking Deserves a Smart Answer, for grades 1–8.
American Lung Association, Maryland Division
1301 York Road, Suite 705
Lutherville, MD 21093
(301) 949-1100

The Spittin' Image: A Smokeless Tobacco Teaching Guide,
for grades 4–7.

Indiana State Board of Health
P.O. Box 1964
Indianapolis, IN 46206-1964
(317) 633-0100

STARS (Students Teaching About Risks of Smoking), for grades 5–12.
American Lung Association of Texas
P.O. Box 26460
Austin, TX 78755
(512) 343-0502



CHAPTER 3

Tobacco Action Curriculum with Video: The Young and the Breathless, for grades 9–12.

Human Relations Media
175 Tompkins Avenue
Pleasantville, NY 10570
(914) 769-6900

Tobacco-Free Teens, for grades 6–12.

American Lung Association of Minnesota
490 Concordia Avenue
St. Paul, MN 55103
(612) 227-8014

Tobacco-Free Teens: Your Guide to Becoming Tobacco-Free, for grades 9–12.

ETR Associates
P.O. Box 1830
Santa Cruz, CA 95061 (800) 321-4407

Tobacco: If You Use ... You Lose, for grades 5–6.

Texas Department of Health: Office of Smoking & Health
1100 West 49th Street
Austin, TX 78756
(512) 458-7402

Tar Wars "The Children Strike Back": Youth Tobacco Education Program, for grades 5–8.

Doctors Ought to Care (DOC)
5510 Greenbriar
Houston, TX 77005
(713) 798-7729

Violence Prevention

Peer Leadership Preventing Violence: A Training Manual, for grades 7–12.

Medical Foundation
95 Berkeley Street
Boston, MA 02116
(617) 451-0049

Alternatives to Violence: A Manual for Teaching Peacemaking to Youth and Adults, for grades K–12.

Peace Grows, Inc.
513 West Exchange Street
Akron, Ohio 44302
(216) 864-5442

Straight Talk About Risks (STAR): A Pre-K–12 Curriculum for Preventing Gun Violence.

Center to Prevent Handgun Violence
1225 Eye Street, NW
Suite 1100
Washington, DC 20005
(202) 289-7319



Helping Teens Stop Violence

Hunter House
P.O. Box 2914
Alameda, CA 94501-0914
(510) 865-5282

Preventing Family Violence: A Curriculum for Adolescents,
for grades 9–12.

Massachusetts Department of Public Health
Office of Violence Prevention
150 Tremont Street
Boston, MA 02111
(617) 727-1246

Violence Prevention Curriculum for Adolescents, for grades 6–8.

Education Development Center
55 Chapel Street
Newton, MA 02160
(617) 969-7100

Other Resources

The Massachusetts Board of Education awards grants to schools to implement comprehensive school health education programs. For more information on the health protection grant, contact:

MDOE
Health Protection Grant Program
350 Main Street
Malden, MA 02148
(617) 388-3300, ext. 409

**EXHIBIT 3-1****Sample Template for Comprehensive Health/Human Development Education Scope and Sequence Chart**

	Personal Health Habits	Human Growth & Development	Family Life & Mental Health	Nutritional Health	Substance Use and Abuse Prevention	Sexuality & Reproductive Health	Injury Prevention & Safety	Violence Prevention	Prevention & Control of Disease	Community Health	Environmental Health	Consumer Health
K												
1												
2												
3												
4												
5												
6												
7												
8												
9												
10-12												



CHAPTER 3

EXHIBIT 3-2

Sample Template for Comprehensive Health/Human Development Education Scope and Sequence Chart

	Personal Health Habits	Human Growth & Development	Family Life & Mental Health	Nutritional Health	Substance Use and Abuse Prevention	Sexuality & Reproductive Health
K				Varieties in Foods and Preparation Food characteristics Snacks Heart healthy foods Food for energy, growth, and health Choosing healthy food ^c		
1				Examples of food groups Snacks from each group Variety of foods needed for good health Food as source of energy and growth		
2	Prevention of ear injuries Hazardous situations to teeth Healthy behaviors Self-responsibility and health status Influences on health status Personal health care measures	Each is unique and special Accepting yourself Values: what's important to me Understanding physically challenged individuals Four main feelings and communication Recognition norms of social behavior Verbal/non-verbal skills Emotional feelings related to physical illness	Importance of sharing thoughts and feelings Getting along with others Families gain members in many ways Many kinds of families Families meet basic needs	Review of food groups Food choices Need for regular eating habits Food production Family, culture, and society How food gets processed in the body	Medicine and other substances that contain drugs – use and abuse Effects of nicotine How smoke enters the lungs Effects of alcohol on physical tasks or activities	Boys and girls are alike in many ways Growing up brings new responsibilities Sexual abuse concepts Good and bad secrets Self-protection skills Different types of love
3				Definition of nutrition and nutrients Nutrient value of food Types and sources of carbohydrates Function of carbohydrates Snack foods which are harmful to teeth Effects of carbohydrates Food preparation Food from various cultures		
4				Six classes of nutrients Nutrient contribution of food groups Functions and sources of proteins and fats Recommended number daily food group servings Influences of food choices		
5				Examination of food intake Food technology Nutrients in the food groups Food handling and quality		
6				Nutrients contained in foods Food groups		
7				Diet analysis Nutrients Food affects hair and skin		
8				Eating Disorders Nutritional needs/influences		
9				Review food groups and nutrients Diet analysis Healthy snacks vs. junk food Understanding food labels Eating disorders and body image Health weight loss or gain		
10–12				Choosing a healthy diet Gaining or losing weight		

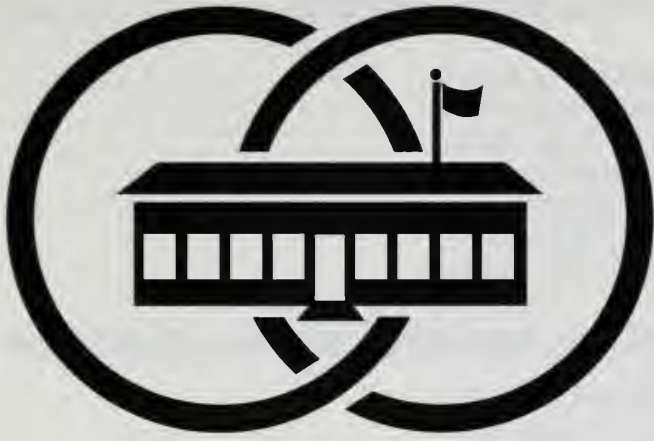
HEALTH EDUCATION CURRICULUM



Injury Prevention & Safety	Violence Prevention	Prevention & Control of Disease	Community Health	Environmental Health	Consumer Health
Seeking help Basic First Aid Prevention and care for eye/ear injury Self-responsibility for accident prevention Home safety rules Prevention and care of dental injuries	Standing up for yourself Accepting people who are different T.V. violence What are weapons? Rules of school about weapons/altercations Expressing anger and hostility	Identification of eye problems When medicine should be used Exercise and proper food for health Many types of germs that cause illness Hand washing Factors affecting health	Community awareness of pollution Community health hazards Effects of littering	Definition of environment Definition of pollution Noise pollution and air pollution	Aids for visually and hearing impaired Advertisements and children

Date	Description	Amount	Debit	Credit





Chapter 4

SAFE AND HEALTHFUL ENVIRONMENT

Building and Environmental Standards

Indoor Air Quality

Asbestos

Radon

Other Environmental Concerns

School Maintenance and Sanitation

Disposal of Medical Waste

School Food Service

Lighting

Water Supply

Grounds



1874/25



Safe and healthful school environments promote prevention activities and attitudes concerning known risk factors and protect students and staff from injury, disease, or adverse conditions. They also contribute to the effective maintenance of the school facilities. A positive school environment is considered key to healthy relationships in the school. (See Chapter 13 for a discussion of safety and the social climate in schools.)

BUILDING AND ENVIRONMENTAL STANDARDS

In Massachusetts, the responsibility for establishing and enforcing minimal structural and safety standards for school buildings is shared by several state agencies. They, in turn, often depend on local health, fire, and building inspection staff to approve school facilities as being in conformance with applicable state codes and regulations. The state agencies involved are the Department of Public Safety, Department of Education, Department of Registration, Department of Public Health, and Department of Environmental Protection.

Department of Public Safety

The State Building Code (780 CMR), most recently amended in 1992, establishes the minimum structural standards for school buildings. Local building inspectors are responsible for inspecting and approving school buildings within their municipality. School buildings must be inspected annually and may not be occupied without a certificate of occupancy.

The Department of Public Safety (MDPS) is responsible for consultation and supervision of the local building inspectors and inspection programs. Within MDPS, the Architectural Barriers Board establishes and oversees regulations to facilitate the use of public buildings (including schools) by the disabled. The Board of Fire Prevention Regulations/State Fire Marshal establishes regulations requiring local inspections in regard to fire hazards.

Department of Education

Within MDOE, the Bureau of Nutritional Education and School Food Services requires compliance with its regulations governing the operation of food service programs. The operation of a food service facility in a school requires a permit from the local board of health. As well, the Bureau of School Building Assistance provides school construction grants, reimbursements, and technical assistance to cities, towns, counties, and regional school districts for the construction of safe and adequate school buildings, additions, and remodeling, rehabilitation, reconstruction, and modernization.

Department of Registration

Within the Department of Registration, the Board of Examiners of Plumbers and Gasfitters (28 CMR) establishes the minimum plumbing and gas standards, including the number of required plumbing fixtures in a school and their accessibility. Plumbing must be in compliance with the regulations and codes for the Commonwealth of Massachusetts and must be maintained in good working order.

Department of Public Health

The Division of Food and Drugs of the Department of Public Health (MDPH) has established standards for food service establishments (105 CMR 590.000), which is administered by the local board of health. A minimum of two inspections by the board of health per year is required.



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A permit must be issued by the board of health. Its issuance is dependent on the facility's meeting the requirements of 105 CMR 590.000: Minimum Standards for Food Establishments. These minimum standards cover all aspects of food sanitation, sources of food, food protection, health and cleanliness of personnel, design and construction, installation and cleanliness of equipment and utensils, water supply, plumbing and sewage disposal, toilet and hand-washing facilities, vermin control, garbage and rubbish handling and disposal, lighting and ventilation, dressing rooms, and housekeeping.

The Division of Community Sanitation has established minimum standards for public and semipublic swimming pools (105 CMR 435.00) and the handling and disposal of infectious waste (15 CMR 480.000). The use of a swimming pool in a school building is contingent upon the pool's being permitted by the local board of health.

The Bureau of Environmental Health Assessment is responsible for ensuring public health compliance with the Massachusetts Right to Know Law (RTK). In addition, this program provides guidance and conducts assessments of indoor air quality in schools and public buildings.

The Division of Water Pollution Control established the minimum standards for sewage disposal in unsewered areas (310 CMR 12.00). The division has the responsibility of approving installations that handle sewage greater than 15,000 gallons per day. Systems with a lesser flow are the responsibility of the local board of health.

The Water Supply Division regulates the quality of the water supply. Schools that are not connected to a municipal water supply must conduct testing and reporting as specified (310 CMR).

Department of Environmental Protection

INDOOR AIR QUALITY

There are two factors considered with respect to indoor air quality: comfort (heat, humidity, and ventilation) and indoor air quality problems caused by pollutants.

Dry, hot air in winter removes moisture from skin and mucous membranes. In summer, hot and humid air prevents a person's body from cooling off; the body tends to react by overheating. Although specific temperatures are not mandated by regulation in Massachusetts, MDPH recommends that heating/cooling systems be properly maintained, with these room temperatures:

- 70° F, 30 inches above the floor in gymnasiums.
- 70° F, 30 inches above the floor in shops.
- 70° F, 30 inches above the floor in elementary, secondary, and higher education classrooms.
- 70° F, 30 inches above the floor level in kindergartens.

Higher or lower room temperatures may be deemed acceptable on a temporary basis under extreme conditions.

Temperature and Humidity



Indoor Air Pollutants

In the 1970s and 1980s, the U.S. Environmental Protection Agency (EPA) conducted several studies to determine individuals' total exposure to air contaminants from both indoor and outdoor sources. These studies showed that concentrations of contaminants were often 2 to 5 times higher indoors than outdoors. Since most individuals spend over 90 percent of their time indoors, indoor pollution clearly is an important environmental health problem.

Some school buildings around the country have been affected by "sick building syndrome," which occurs when its occupants complain of health and comfort problems. Often the problem is not traceable to a single source or contaminant but rather to multiple problems in design, construction, operation, or maintenance of the school building.

Children may be especially susceptible to poor air quality. The same concentration of pollutants will result in a higher body burden in children than in adults because children breathe a greater volume of air relative to their body weight. Some health effects may show up years after exposure has occurred, while others may be immediate.

Causes of Indoor Air Quality Problems in Schools

Four major factors affect the quality of air in schools: ventilation, microbial contamination, contaminated indoor air, and indoor chemical sources.

Ventilation

Ventilation is a critical element in the maintenance of a healthy school environment. Ventilation failures that cause indoor air quality problems include inadequate flow of outdoor air by natural means or mechanical ventilation, poor distribution of air, inadequate exhaust of specific contaminants such as tobacco smoke, ventilation systems that become contaminated due to inadequate cleaning and maintenance, and controls that do not keep temperature and humidity within acceptable limits.

One of the problems is environmental tobacco smoke, composed of sidestream smoke (the smoke that comes from the burning end of a cigarette) and smoke exhaled by the smoker. It is a complex mixture of over 4,700 compounds, including both gases and particles. Nonsmokers' exposure to environmental tobacco smoke is called "passive smoking," "second-hand smoking," or "involuntary smoking."

Ventilation, a common method of reducing exposure to indoor air pollutants, will reduce but not eliminate exposure to environmental tobacco smoke. Because smoking produces such large amounts of pollutants, natural or mechanical ventilation techniques do not remove them from the air in the building as quickly as they build up. In addition, the large increases in ventilation it takes to reduce exposure to environmental tobacco smoke significantly can also increase energy costs substantially.

Legislation in 1993 (M.G.L. c. 71, s. 37H) bans the use of all tobacco products by anyone on school grounds at any time. This should eliminate environmental tobacco smoke problems in the school. (For more information, refer to Chapter 14 for information on tobacco use and abuse.)



Microbial Contamination

Microbial contamination in buildings can become a serious indoor air quality problem. Microbial—contaminants fungi, bacteria, viruses, and dust mites—can result in allergic or infectious diseases, and some microbial contaminants or agents can produce toxic substances.

Microbial agents proliferate in warm, moist environments, often found in humidification systems, water-damaged buildings, carpets and furnishings, contaminated central air handling systems, improperly cleaned and maintained ventilation systems, and moist or wet areas where organic matter, such as paper, books, or dirt, is present.

Some biological contaminants trigger allergic reactions, including hypersensitivity pneumonitis, allergic rhinitis, and some types of asthma. Some transmit infectious illnesses, such as influenza, measles, and chicken pox. And some biologicals, such as certain molds and mildews, release disease-causing toxins. Symptoms of health problems caused by biological pollutants include sneezing, watery eyes, coughing, shortness of breath, dizziness, lethargy, fever, and digestive problems. The number of children with asthma has increased, and these children are particularly vulnerable to biological contaminants in the school (see Chapter 7 for a description of asthma as a chronic health condition).

Carpets that have had water damage are a potential source of airborne contaminants. Shortly after installation, carpets become “dirty” with dead skin cells, food debris, dust, and tracked-in dirt that provides a good growth medium for fungi, spores of which are present everywhere. Moisture is a necessary ingredient for this fungal growth.

If a wet carpet cannot be cleaned and dried within 12 to 24 hours, fungal growth will occur, releasing spores that in an indoor environment can reach airborne levels high enough to cause sensitivity and allergic reaction. It is also believed that even after the carpet dries out, the dead shells of the spores and fungus can cause allergic reaction. The most common health problems are asthma and respiratory congestion; a significant number of adults and an even higher number of children are susceptible.

Routine cleaning of carpets is essential and includes daily vacuuming with an appropriate vacuum and shampooing with a nontoxic shampoo. The Massachusetts Division of Occupational Hygiene recommends removal of water-damaged wall-to-wall carpets. In-place cleaning is rarely successful because carpets do not dry completely. Removable carpets and rugs may be successfully cleaned if dried within 12 to 24 hours. Commercial cleaners who pick up rugs for cleaning are recommended. For those areas where moisture can be a periodic problem, smooth flooring is recommended. If carpeting is necessary, it should be readily removable (e.g., carpet tiles, throw rugs).



Contaminated Outdoor Air

The outside ambient air, particularly in urban areas, at times may be sufficiently contaminated to warrant treatment before it is delivered to occupied areas of the school building. As a result, air-intake vents located close to or downwind from outdoor sources may cause building-related problems. Outdoor sources of pollution such as school bus and other loading areas, trash areas, oil fill areas, exhaust vents from rest rooms, street traffic, or parking lots are common.

Indoor Chemical Sources

Sources in schools include building materials, furniture, carpets, paints, pesticides, cleaning agents, sewer gases, and combustion appliances. Special activities, such as those occurring in science laboratories, industrial/vocational shops, art and craft rooms, photo labs, and duplicating devices can result in a buildup of harmful pollutants if they are not properly ventilated.

If carpeting is used, it should be made of cotton or polypropylene. Nylon, orlon, wool, and silk produce toxic fumes when they become ignited. There is scientific controversy regarding the impact of carpets on indoor air quality, with the EPA concerned about emissions of volatile organic compounds (VOCs) from new carpets and related installation materials, such as carpet cushion and adhesives. Until the debate is resolved and a final determination is made by the appropriate authorities, schools purchasing and installing new carpeting should:

- Talk to the carpet retailer/installer about the carpet industry's voluntary "green label." This label tells the consumer that the carpet type has been tested and passed voluntary emissions criteria.
- Ask the retailer to unroll and air out the carpet in a well-ventilated area before installation.
- Require low-emitting adhesives if adhesives are needed.
- Open doors and windows to increase the amount of fresh air into the building. During and after installation, use window fans and room air-conditioners to exhaust fumes to the exterior.
- Leave the building during and for several hours after carpet installation.

Controlling Indoor Air Quality

The key methods for controlling indoor air quality are reducing exposure from known sources, ensuring adequate ventilation, and air cleaning. An indoor air quality (IAQ) management plan that has both technical and administrative provisions is recommended for each school. Information about IAQ management planning can be obtained from the EPA Regional Office and from the MDPH Bureau of Environmental Health Assessment. In addition, it is recommended that schools:



- Have appropriate heating and ventilation (HVAC) contractors check equipment annually. Any defects in these systems should be repaired immediately.
- At least twice a year, change the filters in any mechanical systems. Do this more often in high dust or pollen areas.
- Ensure that any air-conditioning system drip pans are maintained free of biologic growth. This can be accomplished by the proper installation of the pans so that they drain completely, or by the addition of biocide.
- Check all belts and operating mechanical equipment monthly to ensure proper functioning.

ASBESTOS

Asbestos is a mineral found in certain types of rock formation. It takes the form of small fibers that are usually invisible to the naked eye. Because the fibers are so small and light, they can remain in the air for many hours if they are released from asbestos-containing material, increasing the danger of being inhaled.

EPA estimates that there are asbestos-containing materials in many of the nation's approximately 107,000 primary and secondary schools. Asbestos has been used in thousands of products, particularly heat and electrical insulation. It has also been found in floor and ceiling tile, cement pipe, corrugated-paper pipe wrap, fireproofing, and other insulation.

Intact and undisturbed asbestos materials generally do not pose a health risk. However, asbestos fibers can cause serious health problems when, due to damage or deterioration over time (cracking, tearing, or crumbling), they release harmful fibers. If the fibers become airborne and are inhaled, they can cause cancer or lung disease. These diseases do not develop immediately after inhalation of asbestos fibers; it may be twenty years or more before symptoms become apparent. The more asbestos fibers a person inhales, the greater the risk is of developing an asbestos-related disease.

In 1986, the U.S. Congress passed the Asbestos Hazard Emergency Response Act (AHERA) to protect school children and school employees from exposure to asbestos in school buildings. The AHERA rule requires public school districts and private schools to inspect all school buildings for asbestos, to develop plans to manage asbestos in schools, and to carry out the rules in a timely fashion. Schools are required to inform parents and staff about the presence of asbestos in the school. A copy of the survey report must be available in each school identifying the location of asbestos-containing materials in the school.

The EPA set standards for state accreditation of personnel involved in asbestos management or abatement in school buildings. Inspectors must be certified by the Massachusetts Department of



Labor and Industry. All personnel who remove, repair, or dispose of asbestos-containing materials must be licensed by the state.

RADON

The EPA estimates that radon causes about 14,000 lung cancer deaths in the United States each year. The range of this estimate is between 7,000 and 30,000 deaths per year. The home is most likely to be the greatest source of exposure, but time spent at school in rooms with elevated radon concentrations can result in significant exposure.

Radon is a naturally occurring, radioactive gas generated by the inevitable decay of uranium in the earth. It is colorless, odorless and tasteless. The only way to determine its presence is to test for it.

EPA's National School Radon Survey showed that, nationally, nearly one in five schools had one or more rooms with radon levels over 4 picocuries per liter. While this survey is not statistically significant at the state or local level, this information, along with past surveys of radon levels in Massachusetts homes, underscores the need to test schools. In April 1989, EPA urged all schools to test for radon.

Testing

Because radon levels have been found to vary significantly from school to school and room to room within schools, all frequently occupied rooms in contact with the ground in every school should be tested. Frequently occupied rooms include classrooms, offices, laboratories, cafeterias, libraries, and gymnasiums. Testing of halls and stairways, storage closets, rest rooms, and the like is not considered necessary for initial screening but might be important for diagnostic purposes if elevated levels are found. For large rooms, like gymnasiums or in open-plan or pod design schools, one detector should be deployed for each 2,000 square feet of floor area.

For initial screening measurements, passive radon detectors are typically used. Passive detectors may be generally grouped as long term (more than 90 days) or short term (2-5 days). MDPH recommends short-term detectors. The actual analysis of the detectors should be conducted by a laboratory listed under EPA's Radon Measurement Proficiency Program (RMP). Regional offices of MDPH provide advice on testing strategies and assistance in locating RMP laboratories.

Testing should be conducted during colder months (October through March), on weekdays when school is in session and HVAC systems are operating normally. For short-term tests, closed building conditions must be maintained for 12 hours before the start of and during the testing period. Closed building condition means that all doors and windows are kept closed except for normal entry and exit.

Some schools/districts hire a radon measurement firm to conduct the entire testing program, including sample site selection, deployment and retrieval, data collection, and interpretation. Such firms and individuals should be credentialed under the RMP. Other schools have supplemented the services of an RMP listed laboratory with school personnel placing and retrieving the detectors. In



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this case, the laboratory should assist the school personnel in site selection, quality assurance, and overall supervision of the testing process.

If Elevated Levels are Found

If elevated radon concentrations are found, the school should call the regional office of the MDPH for advice on further investigation and/or mitigation strategies. Several schools have benefited from this consultation, enabling them to reduce elevated radon levels at minimal cost using school maintenance personnel.

OTHER ENVIRONMENTAL CONCERNS

“Right to Know” about Environmental Hazards

Under the Massachusetts Right to Know Law (M.G.L. Chapter 111F), the Massachusetts Substance List (MSL) contains approximately 2,300 individual substances identified as toxic. The main goal of the health and safety law is to prevent occupational disease by informing people about the hazards of toxic substances. Any material sold or used in the school that has any of its ingredients covered by the applicable law is regulated material. Anyone who works in a workplace that contains a regulated material is entitled to all the protections of the law.

Under the law, individuals are entitled to receive information about the toxic substances that are used or stored in the school. There are three sources of information available under both laws: (1) the Material Safety Data Sheet (MSDS), a technical fact sheet that describes the health effects and safe uses of the toxic products on the job; (2) container labels; and (3) employee training.

The MSDS is the most important because it provides health and safety information and is the basis for training employees on the hazards of workplace exposures and safe handling practices for those chemicals. It has eight sections: Product Identity, Hazardous Ingredients, Physical Data, Fire and Explosion Data, Reactivity Data, Health Hazard Data, Precautions for Handling, and Control Measures. Those who learn chemical identities, health effects, and protection from dangers listed on an MSDS are in a better position to correct or prevent potential hazards.

MSDSs are usually shipped with the container of the hazardous materials. Generally, whoever receives that container is the custodian of the MSDS. Sometimes MSDSs are sent to the purchasing agent with the invoice. Because the MDPH has a mandate under the RTK law to provide toxicology information to the public, a school that houses hazardous materials subject to RTK is obligated to send copies of the MSDSs to the Department of Environmental Protection regional office. Access to MSDS by employees or their representatives is required to be provided by the employer within four working days of a request. A treating physician of an employee may receive a copy of an MSDS after signing a confidentiality agreement. A community resident may receive a copy of an MSDS by a petitioning process to the community's municipal coordinator.

RTK activities for the MDPH are coordinated through the Emergency Response/Right-to-Know Program of the Bureau of Environmental Health Assessment.



Recycling

The average American throws away more than 1,300 pounds of trash a year. In recent years, a garbage crisis has raised the attention of the nation and the world. As we are faced with ever-increasing amounts of garbage and no place to put it, more and more Americans are recognizing the need for action. Recycling is one important remedy to the garbage problems much of the nation is facing today.

Schools can take a leadership role in recycling. School recycling programs can help students learn to respect the environment, become aware of their impact on it, and develop positive attitudes and behaviors. EPA's Office of Solid Waste has developed a comprehensive educational program, "Recycle Today", to promote recycling programs and waste awareness in schools. See the **Resources** section of this chapter for more information.

Underground Storage Tanks in Schools

Underground storage tanks may become an environmental concern. Such tanks, many of which are made of steel, have rusted and are leaking their contents into the ground. Many school districts that operate school buses own underground storage tanks for gasoline. Also, school buildings, like many other large institutions, require large boilers to heat their facilities. The heating oil is typically stored in underground storage tanks and tends to be a lower grade (number 6), which, when heated, is highly viscous. Therefore, any leak or spill can create a serious problem and become an environmental hazard.

The safety of these storage tanks is dependent on their age and condition. The local fire department is responsible for setting up and dismantling storage tanks (CMR 527, 9), and should be contacted if a school district is in doubt about the safety of its tank. Many municipalities have regulations that require periodic testing. The state Department of Environmental Protection may be called if tanks become an environmental problem.

Pesticides

Pests may be managed or controlled by various means. Preventive measures include reducing or excluding hiding and nesting places and food available to pests. If pests increase, they may threaten the health of people or damage property. In this situation, pesticides are usually required.

Pesticides are toxic tools used to control pests. All pesticides legally sold in the United States must bear an EPA registration number on the front of the product label to show that they are registered. There are very few exceptions to this rule. School personnel may use pesticides only when pests require immediate attention. For example, if a hornet were loose in the classroom, a custodian could spray it. Treatment of a hornet's nest, however, would need to be done by a licensed individual. Pesticides are placed into the environment or a site with the purpose of controlling a specific pest. Only a certified pest control operator is allowed to apply pesticides for crawling insects such as roaches, ants, and spiders.

No custodian or other school personnel may use any pesticide, even those sold over the counter, without first becoming licensed through the Massachusetts Department of Food and Agriculture.



Pest control in schools should be done as part of an integrated pest management (IPM) program—the coordinated use of pest and environmental information with available pest control methods to prevent unacceptable levels of pest damage by the most economical means and with the least possible hazard to people, property, and the environment. A successful IPM program requires not only a skilled and knowledgeable pest control operator but the cooperation of building managers and occupants. The EPA, as well as the state, encourages the IPM approach and is working with school officials and others to develop guidance for IPM in schools.

Insecticides and rodenticides must be stored in locked storage areas that are accessible only to authorized personnel. All pesticides and rodenticides must be used in accordance with registered label directions. Instructions on the safe and proper use of these chemicals should be clearly posted.

Programs within the MDPH Bureau of Environmental Health Assessment provide diversified consultation with regard to toxic exposures arising from consumer products and pesticides used in the indoor environment. The Pesticide Bureau at the Department of Food and Agriculture has field staff who investigate pesticide misuse and can provide information on health risks of pesticides, pesticide licensing, IPM, and the proper and effective use of pesticides.

Toxic Art Supplies and Safety in Science Labs, Shops, and Automotive Labs

Some art supplies and several of the materials used in science labs, shop, or the automotive lab contain hazardous substances. Therefore, it is important for the instructor and students to be aware of these toxins and to know the precautions they can take when handling, disposing of, and recycling these materials:

- Use nontoxic products when available, such as biodegradable and low-phosphate products.
- Read the product label. Substances that are poisonous, corrosive, or flammable, should be handled with care.
- The best disposal method for any product is to finish it or give it to someone else who can use it.
- If the label carries a warning about not getting the contents on the skin, wrap the container in newspaper, and dispose of it according to regulations.
- Recycle wastes. Take used or contaminated motor oil to an automotive service center.
- For products that can go down the drain, use plenty of water. Dispose of each product separately.
- Do *not* remove product labels, dispose of any products by pouring them on the ground, or refill empty containers, even with the same material unless the label recommends it. Once a container is empty, dispose of it properly.



- Be familiar with hazardous waste disposal practices. Many chemistry laboratories have been found to contain improperly stored and outdated chemicals. These must be disposed of appropriately by licensed hazardous waste firms. Additionally, incompatible materials should not be stored together.

For specific information about hazards associated with painting, ceramics, welding, soldering, woodworking, photography, print-making, and solvents, see the Resource list at the end of the chapter.

Laboratory Safety

School science laboratories present complex and unique combinations of hazards that require particular attention. A comprehensive safety program should deal with issues from dangerous exposure to hot water and broken glassware to toxic exposures and fire. Safety rules specific to the activities conducted in each laboratory classroom, including proper attire and the use of personal safety equipment, should be posted and enforced. A list of possible issues to consider includes:

- Adequate ventilation for laboratory activities.
- Fume hoods kept free of storage and routinely inspected and maintained.
- Adequate bench space with necessary utilities.
- Small enough class size to allow proper supervision.
- Chemicals ordered in quantities only large enough for short-term needs.
- Flammable liquids stored in approved containers or in properly vented approved flammable storage cabinet.
- Fire extinguishers, fire blankets, drench showers, eye wash stations, and hand-washing facilities adequate for the activity conducted.
- Electrical equipment properly grounded and inspected regularly.

Hazards from Video Display Terminals

Evidence to date indicates that exposure to video display terminals (VDTs) may pose minor health problems. VDTs are not a source of dangerous radiation. Although there is some evidence that VDTs may increase physical and emotional stress, studies suggest that measures can be taken to reduce these stresses, such as relaxing, decreasing the work load, and relieving boredom in the workplace. Thus far, no information has been found that definitively rules out an effect of VDTs on reproduction. Major epidemiological study is being conducted to answer this question.



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Photocopiers, Mimeograph Equipment, and Other Machines

The most important health consideration with photocopiers is location. They should be located in rooms where there is local exhaust over or immediately adjacent to the machine to exhaust the air directly to the outside. Locating them in a large and well-ventilated area will reduce possible health concerns. This is especially important if workers have to share space with the photocopier or other machines. It is recommended that the glass plate cover be closed while copying. In addition, special attention should be given to the refilling and disposal techniques for toner in dry machines. The warnings on the additives for photocopy, mimeograph, and duplication machines should be read and followed.

SCHOOL MAINTENANCE AND SANITATION

Cleanliness is an extremely important aspect of a healthful school environment. Proper sanitation consists of maintaining the building free of those conditions that could lead to the transmission of disease.

Each area of the school has its own particular cleaning and disinfectant needs. MDPH strongly recommends that each school develop a written policy and plan for the cleaning and sanitizing of each area, and assign the responsibility for carrying out the plan to a specific person in the school.

The least expensive and highly effective sanitizing agent is chlorine bleach. Deodorizers should not be used; they only mask the problem. Chlorine (bleach) used to sanitize food contact surfaces, equipment and utensils must be EPA approved for food service sanitation. The container of approved chlorine will have specific labeling for food establishment use and an EPA registration number. Exhibit 4-1 presents the appropriate ratio of bleach to water for various surfaces and facilities in schools.

There must be adequate housekeeping and maintenance equipment and cleaning supplies, and equipment should be appropriate for the task it is intended to do. For instance, a vacuum cleaner should have adequate capacity and be powerful enough to clean rugs. Vacuum cleaners must also have proper filters to eliminate the dust and other small particles from being expelled from the equipment. The equipment must be kept clean, in good working condition, and be stored safely. All cleaning supplies and toxic materials must be kept in containers that are properly labeled with their contents. In food areas, cleaners, sanitizers and toxic materials must be stored away from food items.

Hand Washing

Hand washing is the first line of defense against infectious disease and is one of the universal precautions. Numerous studies have shown that unwashed hands are the primary carriers of infection. A person should always wash his or her hands:

- Before eating or handling food.
- Before feeding a child.
- After toileting.



- After handling body secretions (mucus, vomitus, etc.).
- After cleaning.
- Before and after giving medication.

The five most important concepts to remember about hand washing are:

1. Use running water that drains out, not a stoppered sink or container which spread germs.
2. Use soap, preferably liquid.
3. Use friction (rubbing the hands together). This action removes the germs.
4. Turn off the faucet with a paper towel to prevent recontamination of clean hands by a dirty faucet.
5. Dry hands by single-use towels, an air dryer, or fabric roll towels from a dispenser. Common towels are prohibited.

Hand lotion may be desirable for staff use to prevent dry or cracked skin.

It is a good idea to post a hand-washing poster above every sink in the school. Furthermore, required in every food service area and in every employee toilet for food service workers is a poster saying "WASH YOUR HANDS BEFORE GOING BACK TO WORK". Posters are available from MDPH.

Disposable Gloves

Disposable latex gloves are used to provide a protective barrier against germs that cause infections. They should be provided to any staff persons who may handle bloody fluids or feces. Gloves should be properly disposed of after each use in the regular waste receptacle.

Gloves are *not* a substitute for hand washing. Hands and other skin surfaces should be washed immediately and thoroughly if contaminated with body fluids.

Disposal and Storage of Garbage and Rubbish

The school must be kept free of accumulated garbage or rubbish. In order to do so, school staff should adhere to the following guidelines:

- Store garbage and rubbish in containers that are water and rodent proof, with tight-fitting lids. Remove rubbish daily from classrooms and other areas of the school.
- Use plastic bags to line covered containers and put out for collection, unless prohibited by the local board of health.
- Wherever possible, recycle materials.



CHAPTER 4

Animals in the School

MDPH discourages the practice of keeping animals in schools because of potential allergies, bites, and spread of disease. However, if they are kept at the school, they must be adequately immunized, fed, sheltered, and kept clean. They are prohibited from food storage, preparation, service, and dining areas. Do not permit turtles, parrots, raccoons, bats, or wildlife known to carry rabies or other diseases. Be sure that no child in a class is allergic to animals.

Animal areas must be cleaned frequently. Wash hands after handling or cleaning. Children who assist with pet cleaning and maintenance must learn proper hand washing procedures. An exemption has been provided to allow guide dogs in dining areas when accompanying blind, deaf, or other disabled persons.

DISPOSAL OF MEDICAL WASTE

Schools have a responsibility for disposing of infectious or physically dangerous medical waste generated in school settings. In Massachusetts, this waste is regulated by 105 CMR 480.000: Storage and Disposal of Infectious or Physically Dangerous Medical or Biological Waste, State Sanitary Code, Chapter VIII. The regulations define (1) what is infectious and physically dangerous medical waste, (2) who is a generator of such waste, and (3) how infectious and physically dangerous medical waste must be handled.

This section explains what is considered infectious and physically dangerous medical waste and how it must be handled and disposed of and deals only with categories of medical waste normally expected to be found in a school setting. A major, but not controlling, consideration for the inclusion of an article as an infectious or physically dangerous medical waste, is that the article had been used for a medical purpose. There may be some exceptions, such as culture plates.

*For handling all medical wastes, follow universal precautions, an infection control concept in which all human blood and certain body fluids are treated as if they are infectious for bloodborne pathogens. **When handling infectious or physically dangerous medical waste, always wear latex gloves.***

Types of Infectious or Physically Dangerous Medical Waste

Categories of medical waste in schools include sharps, blood and blood products, cultures and stocks of infectious agents and associated biologicals, medical waste spills, and other categories.

Sharps

Sharps include discarded medical articles such as needles, syringes, scalpel blades, razor blades, lancets, broken medical glassware, and pasteur pipettes.

Sharps must be segregated from other waste and aggregated in leakproof, rigid, puncture-resistant, shatterproof containers immediately after use. Do not recap or break needles from syringes before placing in containers. These containers must be red, distinctively marked with the biohazard symbol and labeled to indicate that they contain sharp waste capable of inflicting punctures or



cuts. Both containers and biohazard labels are available through medical supply houses.



Disposal may be accomplished by various means, including chemical, steam, or thermal disinfection or by incineration. *Sharps, if treated by any method other than incineration, must be rendered physically nonhazardous by grinding prior to ultimate disposal.* Incineration must occur in a Type IV incinerator approved by the Massachusetts Department of Environmental Protection. (Consult the MDEP for further information.)

Nonmedical use of sharps does not require the handling and disposal of these articles in accordance with the regulations; nevertheless, care must be taken to dispose of them in a safe manner to prevent cuts and puncture wounds.

Blood and Blood Products

These include discarded bulk human blood and blood products in a free-draining liquid state, body fluids contaminated with visible blood, and *materials saturated and dripping with blood.*

Free-draining blood and blood products shall be stored at all times in leakproof containers that are sealed. Unless restricted by the local sewer department or the local board of health, these wastes may be disposed into a sanitary sewage system.

Band-aids and other dressings are included in the definition of infectious or physically dangerous medical waste *only* if they are saturated and dripping with blood. Band-aids and other dressings that are not saturated with blood, as well as articles that are used for personal hygiene such as sanitary napkins or tampons, should be handled with care and caution, but may be disposed of as regular solid waste.

Cultures and Stocks of Infectious Agents and Associated Biologicals

These include all discarded live and attenuated vaccines from immunizations intended for human use and all discarded culture plates that may have been used for demonstration in science classes, such as growing bacteria. (Regulations 105 CMR 480.000 contain complete definitions.)



It is unlikely that biological effluent, stocks of infectious agents, or contaminated animal carcasses may be encountered in a school setting; nevertheless, the regulations for infectious or physically dangerous medical waste apply to their disposal. These must be placed in double nonpermeable 3 mil or equivalent polyethylene bags and securely sealed to eliminate leaks. These bags must be red and marked with the biohazard symbol.

Other Categories of Medical Waste

Disposal of controlled substances, including most medications, is usually the responsibility of the patient. However, on occasion, such as when medication is abandoned, it may be necessary for a school to take responsibility for disposal. In such a case, the school nurse and principal should document the date of abandonment. The nurse should then, in the presence of a witness, dispose of the substance into a sanitary sewage system, unless otherwise restricted by the local sewer department or the local board of health. The date of disposal should be recorded, and the record should be signed by the nurse and the witness.

Other categories of infectious waste that are generally not found in a school setting and are not described above, such as contaminated animal carcasses, must be placed in double nonpermeable 3 mil or equivalent polyethylene bags and securely sealed to eliminate leaks. These bags must be red and marked with the biohazard symbol.

Medical Waste Spills

Staff must clean up blood spills with a 1:10 household bleach (sodium hypochlorite) solution prepared within 24 hours before use, pouring the solution around the periphery of the spill and onto the spill itself. When a bleach solution may not be used (as on a carpet), a chemical disinfectant that is EPA registered as indicated on the label is used, following the manufacturer's instructions.

Small amounts of medical waste may be disinfected by saturation with a 1:10 household bleach (sodium hypochlorite) solution. Bleach solution should be fresh (prepared within 24 hours before use). Treated waste is placed in double bags (polyethylene bags or 3 mil nonpermeable), which should *not* be red, for disposal with the regular trash. Mark **DISINFECTED MEDICAL WASTE** and the name of the school.

The School's Responsibilities for Preparing and Disposing of Infectious Waste

Each school is responsible for the preparation of infectious and physically dangerous medical waste in an acceptable manner and for providing contractual arrangements for the ultimate disposal of waste that is not disinfected on-site at the school. This may be accomplished through a waste disposal company capable of handling infectious waste or by agreement through a visiting nurse agency, hospital, or physician's office or other agency.

In the case of infectious or physically dangerous medical waste that is disinfected and disposed of on-site, a log must be kept in a bound book with (1) type of waste and how it was disinfected and disposed of (example: "Bloody dressing disinfected by bleach solution") and (2) the date and signature of the individual who disinfected the waste. The waste then should be double-bagged,



marked “disinfected medical waste”, and disposed of with the general waste.

The removal of infectious or physically dangerous medical waste from any site of generation, including schools, requires that the generator prepare a manifest (available from the local waste hauler) that tracks the waste from the point of generation through the point of ultimate disinfection and disposal. It is also important that the school district ensure that the waste is being transported to an appropriate facility for disinfection and disposal. The regulations give specific instructions for this process.

SCHOOL FOOD SERVICE

Food service operations in the schools of the Commonwealth must be carried out in a manner that will prevent the occurrence of food-borne illness, a major public health problem. The incidence of such illness can be reduced by following basic principles of food protection for instance, use of wholesome foods, suitable equipment, and sanitary food practices. Food may be prepared at the school or off-site and transported to the school. All food operations must be conducted in accordance with 105 CMR 590.000.

Many foods are ideal media for the growth of microorganisms, including pathogenic bacteria. Contamination with pathogenic bacteria combined with mishandling or temperature abuse will result in infectious levels of bacteria or toxin production and subsequent foodborne illness outbreaks. Food sanitation is particularly important in a school food service program since the food is usually prepared to be served to a large number of students at one time, all of whom would be subject to illness if the food were not safe and wholesome.

Guidelines for Food Service Personnel

Food service personnel must be in good physical health and be free of symptoms of communicable diseases, open or infected cuts, burns, sores, or skin conditions that may contribute to the contamination of food. The food service manager should be able to recognize such conditions in the staff and exclude them from working in direct contact with food. A person with AIDS who does not have open or infected cuts, burns, or sores should not be excluded from working in a food service facility.

Food service personnel must have clean hands at all times and should not wear rings. Hands must be washed with soap and hot running water after using the toilet, coughing, sneezing, using a handkerchief, handling any object which may contaminate food, and between other operational functions and return to food preparation or handling functions.

Fingers should be kept out of the mouth and away from the hair, face, and nose. Workers must not eat or drink or use tobacco products in food areas. Plastic gloves are primarily suited for a continual food handling function. If used, workers must change them when switching from one operation to another. The use of gloves is not a substitute for hand washing. When food service workers change from a nonfood handling function to a food handling function or



Food Preparation and Storage

from handling raw foods, they must still wash their hands before using gloves. They must also wear clean clothes and keep their hair secured with a hairnet, hat, or fastener.

Adequate equipment must be provided and maintained to ensure proper temperatures for food during storage, preparation, and service, as well as for the sanitation of dishware, tableware and utensils. There must be a sufficient number of thermometers to monitor these temperatures constantly, and there must be test kits for monitoring the strength of the required sanitizing agents.

If food is transported from one facility to another, adequate holding temperatures must be maintained at all times. Potentially hazardous foods must be either below 45°F or above 140°F at all times. The schools must have the facilities to accomplish this during storage, transportation, and service. It is important that the food and the food establishment be protected from contamination by insects and rodents, by the use of screens and other protective devices.

Local boards of health, MDPH, and the Bureau of Nutrition Education and School Food Services in MDOE are sources of assistance in training of food service personnel.

LIGHTING

The provision of adequate interior and exterior school lighting is primarily the responsibility of illuminating engineers and architects. However, the administrator, classroom teachers, and the health staff must understand the basic principles of lighting in order to use available facilities properly and recommend change when needed. The administrator should not permit the standards to decline in the name of economics or energy savings.

While quantity of light is important, the *quality* of light is even more significant, as demonstrated in extensive research. In order to supply suitable light to all working surfaces for efficiency and comfort, the following should be considered:

- There should be control of both bright and dark areas to avoid glare. This is best accomplished by diffusion, that is, light coming from many directions rather than a single source, whether artificial or natural, but also the reflective surfaces of desks, walls, woodwork, and so forth. The adverse effects of glare are cumulative; for a short time they are annoying; with prolonged exposure, a person becomes progressively fatigued and may develop eyestrain and headaches.
- Room colors greatly influence the effectiveness of a lighting system. Color and texture determine how much light is reflected. Room colors also contribute to a variety of psychological reactions and have been described as, for example, warm, cool, neutral, or depressing. Warm tones — peach or white with pink tones, for example — are considered best.



- Different light intensities are needed for different tasks. The fifth edition of *The Massachusetts State Building Code* (Article 1) requires that in large buildings, such as schools, a Massachusetts-registered engineer or architect must certify that the lighting in the school complies with the building code.

Illumination deteriorates rapidly unless windows are kept clean and wall and ceiling surfaces are well maintained. As light bulbs are used, they blacken and give off less light. Dirt and dust reduce the reflecting and transmitting qualities of lighting units. Therefore, provision should be made for a system of regular inspection by the local building inspector, preferably with a light meter. To help determine whether a classroom is appropriately lighted, the following questions should be answered:

- Is the room free from sharp shadows?
- Is it possible to exclude sunlight by adjustment of shades or blinds?
- Are walls, desktops, and chalkboards free from bright reflections?
- Are all lamps shielded so that bright light does not shine in the eyes?

WATER SUPPLY

The system must provide a safe, potable, adequate water supply that is connected to a municipal supply or meets the requirements of Department of Environmental Protection (310 CMR). The latter applies to all private wells serving at least twenty-five users for more than 60 days.

Plumbing

Regulations govern the number of plumbing fixtures (toilet, hand washing sinks, and drinking fountains) that must be in a school (248 CMR 2.10). School buildings must have hot and cold water under pressure, flush toilets, washrooms, and the necessary pipes and fittings to maintain these facilities in good repair. All plumbing fixtures should be designed and maintained to be accessible by the age group being served and by individuals with disabilities.

Toilets and Lavatories

Toilets and washrooms must be available for use at all times and monitored if necessary. Rooms must be unlocked and fully accessible. Sound public health practice dictates that soap (preferably liquid), paper towels, and toilet paper be provided.

According to 248 CMR 2.10, toilets must be located in separate toilet rooms for each sex and on each floor where classrooms are located. In elementary schools, the ratio of toilets to number of boys is 1:60; for girls, it is 1:30. In middle and high schools, the ratio of toilets to young men is 1:90; for young women, it is 1:45. Separate facilities must be provided for teachers and employees, as well as for kitchen employees. When auditoriums and multipurpose rooms have a community use, additional toilet facilities must be provided.



All toilet facilities must be ventilated directly to the outside, either by windows that open or by mechanical exhaust systems.

Hot and cold water or tempered water under operating pressures (20 psi minimum) should be available for bathing and washing. Hot water delivered to showers and lavatories should not exceed 110°F. The temperature of hot water at other fixtures should not exceed 120°F, except where necessary for sanitizing purposes.

Drinking Water Fountains

Drinking fountains should be conveniently located on each floor (at least one per floor in a ratio of 1 fountain per 75 students), according to plumbing code 248 CMR 2.10. The fountains must be at appropriate heights for the users and should be easily accessible to all school program activities. Drinking fountains should not be installed on sinks in bathrooms used for hand washing or arts and crafts or on sinks in toilet, science, or art areas. Drinking fountain spouts should be of angle jet construction, with water pressure maintained so that it extends at least 1 inch beyond the mouth guard. (See Chapter 15 for a discussion of fluoride in drinking water.)

Lead in Drinking Water

Lead in drinking water in schools does not pose a serious health threat to school-aged children. Nonetheless, schools should still be concerned about the existence of lead in air, water, soil, food, and dust. Lead occurs naturally in soil, which also collects lead from the air and other sources. Lead is also a naturally occurring ingredient in surface and ground waters that supply drinking water to many millions of Americans. The use of lead in plumbing is now banned, but it can still get into drinking water from old water pipes that contain lead. Sources of lead are lead-based paint and dust, soil contaminated with lead from paint, leaded gasoline, or industrial processes.

Nowhere is the lead problem more serious than in the lead belt of the Northeast and the older parts of the Midwest, where the EPA says that lead in the drinking water accounts for about 20 percent of children's lead exposure, which is far behind lead paint. A combination of old pipes and highly corrosive water has given the region's drinking water some of the highest lead levels in the nation.

Although drinking water is rarely the sole cause of lead poisoning, it can significantly increase a person's total lead exposure. Lead dissolved in water cannot be seen, tasted, or smelled. The only way to know if it is a problem is to test the water.

Once in the body, lead is very slow to leave the system. It can damage the brain and the central nervous system of children, interfering with their learning abilities and physical growth. Children under the age of 6 are at the most at risk because their bodies are small and tend to absorb lead into their bloodstream quickly.

Fortunately, these toxins can be reduced or removed from the drinking water faucet. *A tap that has not been used in the last 6 hours should be run, and no one should use hot water for drinking because hot water draws lead out of pipes faster.* If funds become available



and water conservation is particularly needed in the community, the existing problem plumbing should be replaced with nonlead pipes, fixtures, and solder.

The EPA passed tough lead rules that took effect January 1, 1993. The EPA training video, *Lead in School Drinking Water*, demonstrates how to carry out a successful sampling program. It can be obtained from the regional EPA office.

See also Chapter 5 for a discussion of lead poison screening.

Sewage Disposal

All liquid wastes must be disposed of directly into an appropriate sewage disposal system, directly connected to a municipal system or a subsurface on-site sewage disposal system. An on-site system is regulated by the Department of Environmental Protection (310 CMR 12). *It is extremely important to ensure that the system is maintained free of leaks and backups in order to negate the spread of disease through contaminated or toxic sewage.*

GROUNDS

The first impression anyone gets of a school building is from the grounds and physical condition of the building itself. The condition of the physical plant can affect the attitude students and staff have toward the school. Therefore, grounds should be free of litter and accident hazards. Although not mandated, well-maintained landscaping also adds to the image of the school.

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——— (1988). *The Inside Story. A Guide to Indoor Air Quality*. Publication 400/1-88/004. Washington, DC: U.S. EPA.

——— (1988). *Pest Control in the School Environment*. Publication APT-2311. Washington, DC: U.S. EPA.

U.S. Occupational Safety and Health Administration. (1991). *Occupational Exposure to Bloodborne Pathogens; Final Rule*. December 6. 56:64176-64182.

RESOURCES

Asbestos

Massachusetts Division of Occupational Hygiene
(617) 969-7177

U.S. EPA Region 1
(617) 565-3835

Building Codes

Massachusetts Department of Public Safety
(617) 727-3200

Food Service

Massachusetts Department of Education
(617) 388-3300

Massachusetts Department of Public Health
Division of Food and Drugs
(617) 727-2670

Indoor Air Quality

U.S. EPA Region 1
(617) 565-3232

Massachusetts Department of Public Health
Bureau of Environmental Health Assessment
(617) 727-7170

Lead in Drinking Water

Massachusetts Department of Public Health
(617) 522-370
U.S. EPA Region 1
(617) 565-3835



Medical Waste Disposal

Massachusetts Department of Public Health
Regional School Health Advisors
See Section IV: General Resources for phone numbers

Massachusetts Department of Labor and Industries
Division of Occupational Hygiene
1001 Watertown St.
West Newton, MA 02165
(617) 969-7177

Pesticides

U.S. EPA Region I
Pesticides and Toxics Branch
J.F. Kennedy Federal Building
Boston, MA 02203-2211
(617) 835-3279

Massachusetts Food and Agriculture Department
Pesticide Board
(617) 727-3020 ext. 145

Plumbing and Gas Standards

Massachusetts Department of Registration
(617) 727-9952

Public Swimming Pools

Massachusetts Department of Public Health
Division of Community Standards
(617) 727-2660

Radon

Massachusetts Department of Public Health
(617) 727-6214
(413) 586-7525

U.S. EPA Region 1
(617) 835-3234

Recycling

Environmental Protection Department
Office of Solid Waste
(617) 292-5960

Right To Know Law

Emergency Response/Right to Know Program
Bureau of Environmental Health Assessment
Department of Public Health
(617) 727-7170

School-Operated Water Systems

Department of Environmental Protection
(617) 292-5770

U.S. EPA Region 1 Water Supply Branch
(617) 565-3665



CHAPTER 4

Underground Storage Tanks

Massachusetts Department of Environmental
Protection
(617) 292-5500

U.S. Environmental Protection Agency
Office of Underground Storage Tanks (OS-400)
401 M Street, SW
Washington, DC 20460



EXHIBIT 4-1

Sanitizing Solutions for Surfaces and Facilities in the School

Area to Be Sanitized	Sanitizing Solution	Additional Directions
Usual everyday solution for table tops, food contact surfaces, drinking fountains, water tables, water play equipment, cots/sleeping mats	1 tablespoon bleach per 1 gallon of water (200 parts per million)	Should test 100 to 200 parts per million with test kit; works well in a spray bottle so it is convenient for use on table tops between activities
Bathroom sinks, toilets, potty chairs	¼ cup bleach per 1 gallon of water or 1 tablespoon bleach per 1 quart of water	
Blood spills and vomitus	1 part bleach to 10 parts water	If the spills occur on dishes, table tops, food contact surfaces, drinking fountains, or cots/sleeping mats, clean item with this solution, then wash and rinse again, and then use less strong solution for final rinse

Table 1: Summary of Data	
Category	Value
Category 1	Value 1
Category 2	Value 2
Category 3	Value 3
Category 4	Value 4
Category 5	Value 5
Category 6	Value 6
Category 7	Value 7
Category 8	Value 8
Category 9	Value 9
Category 10	Value 10
Category 11	Value 11
Category 12	Value 12
Category 13	Value 13
Category 14	Value 14
Category 15	Value 15
Category 16	Value 16
Category 17	Value 17
Category 18	Value 18
Category 19	Value 19
Category 20	Value 20
Category 21	Value 21
Category 22	Value 22
Category 23	Value 23
Category 24	Value 24
Category 25	Value 25
Category 26	Value 26
Category 27	Value 27
Category 28	Value 28
Category 29	Value 29
Category 30	Value 30
Category 31	Value 31
Category 32	Value 32
Category 33	Value 33
Category 34	Value 34
Category 35	Value 35
Category 36	Value 36
Category 37	Value 37
Category 38	Value 38
Category 39	Value 39
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Category 86	Value 86
Category 87	Value 87
Category 88	Value 88
Category 89	Value 89
Category 90	Value 90
Category 91	Value 91
Category 92	Value 92
Category 93	Value 93
Category 94	Value 94
Category 95	Value 95
Category 96	Value 96
Category 97	Value 97
Category 98	Value 98
Category 99	Value 99
Category 100	Value 100



BASIC SCHOOL HEALTH SERVICES

Basic school health services typically include health assessments (both population based and individual), care of children with special health care needs, and management of communicable diseases. The school nurse is usually the manager of the school health service program; therefore, the basic health services generally fall within her or his purview. This section provides guidelines for these basic services while emphasizing that school nurses, like their colleagues in other health care settings, are licensed by the Board of Registration in Nursing; hence school nursing practice must be consistent with the board's statutes and regulations.

Chapter 5:

Health Assessment provides information on the health status of children and adolescents in the school setting. The school health service program utilizes population-based screenings to provide a safety net for ensuring that students are screened for vision, hearing, and other health conditions. Individual student health encounters also provide opportunities for the nurse to assess a student's health status and risks in the school setting. This becomes especially important if children lack primary care providers and/or are uninsured or underinsured. The chapter identifies assessments, physical examinations, and screenings required by statute or regulation and offers specific guidelines for implementation. In addition, it includes guidelines for nursing assessment of common illnesses presented by students in the school setting.

Chapter 6:

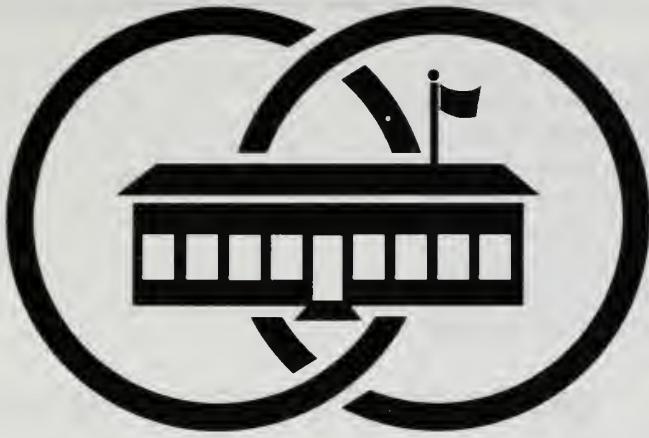
Nursing Practice in the School Setting summarizes standards of school nursing practice as developed by national professional organizations. Because school nurses typically practice in settings that are fairly isolated from colleagues in the health care field, it offers suggestions for maintaining current knowledge and skills, as well as networking with other professionals concerned with the health of children and adolescents. The chapter also describes some of the relevant Massachusetts Board of Registration in Nursing standards and regulations as they relate to nursing practice in the school setting. Specific attention is given to delegation to unlicensed personnel and administration of medications in the school setting.

Chapter 7:

Children with Special Health Care Needs emphasizes that advances in medical technology, legislation ensuring access to education in the least restrictive environment, and the efforts of child advocacy groups have resulted in increased numbers of children with a range of health care needs in the school settings. These children require ready access to a variety of health care services. This chapter describes the importance of planning for the care of children with special health care needs, including guidelines for developing and implementing individual health care plans to ensure that the child receives safe, appropriate care during the school day. The participation of parents, health care providers, school nurses, and other school staff is essential to this process.

Chapter 8:

Infectious Disease Control is a comprehensive description of the communicable diseases that school health service programs encounter, both those that are fairly common and those that are less common but have a profound health impact. The nurse's responsibilities include ensuring that students are appropriately immunized and, should an infectious disease occur, preventing its spread. The chapter is designed to assist school personnel in managing infectious diseases while providing guidelines for school attendance and parent notification.



Chapter 5

HEALTH ASSESSMENT

Student Health Encounters

Population-Based Screening Programs

Physical Examination

Health assessment consists of day-to-day health encounters, planned and unplanned, that school health personnel have with students and staff; population-based screening programs; and routine physical examinations. A comprehensive health assessment process involves the school health personnel collecting subjective and objective data related to the student's health and illness behaviors, analyzing the data for accuracy and completeness, collecting more data as needed, and analyzing the information for identification of student health risks, problems, and potential stressors.

STUDENT HEALTH ENCOUNTERS

Typically, 40 to 50 students go to the school health office every day for health assessment and care. They present a range of complaints, from potentially life-threatening situations to more common problems like colds and coughs. Students also seek advice, support, or just time out from stress in both the classroom and at home. Although most students go to the health room, informal encounters may occur in any number of locations in the school: a student interacts with a nurse in the hallway, cafeteria, or playground; a teacher stops the nurse in the hallway to refer a student; or a nurse conducts a follow-up with a child in the hallway or some other place in the school (following the child's visit to the health room).

School nurses are frequently assigned to cover more than one school, and as such they are not always readily accessible to students. Often a teacher, health aide, or school secretary is the initial person to see the student, so it is important for them to understand the parameters of a school health encounter and what types of questions should be asked to assist licensed health personnel in making an assessment. *Making a health assessment remains the responsibility of the school nurse or other fully qualified and licensed medical personnel.*

Assessment

When assessing a student, the school nurse needs to obtain both *subjective* data (the history of the complaint) and *objective* data (information about signs of an illness, e.g., temperature). In addition, the initial person seeing the student must skillfully explore the presenting symptom by analyzing the complaint. Information on the location, frequency, duration and severity, quality, quantity, setting, associated symptoms, and factors that make the symptom better or worse will guide the action taken, including referral to a health care provider, observation in the health office, and/or notifying parents.

Assessment includes a physical assessment (e.g., temperature, vital signs) and taking appropriate measures, such as having the student rest in the health room and either returning to class or calling parents if student is sent home, suggesting any follow-up with the primary care provider, or calling emergency services.

Exhibit 5-1 is a sample school health encounter form. This or a similar form may be designed in duplicate, with the second copy, omitting the name, collected centrally and entered into a database.



Interview

The interview is part of the assessment process. School health personnel should ask open-ended questions that encourage a student to describe the problem. It is important to encourage discussion around different areas of the student's life, such as home, work, and school, especially if the problem seems to be chronic. For today's child, especially the adolescent, a psychosocial review of systems is every bit as important as the physical exam. A brief psychosocial assessment, including asking questions about any risk behaviors the child may be engaged in, may include the following questions:

- "Tell me about it."
- "When did it start?"
- "Has it ever happened before?"
- "What did you do?"
- "Did you tell your parents? What did they do?"
- "Are you taking any medication?"
- "Are you having problems in your classes?"
- "What class do you have now?"

Questions may focus on the following categories: home life, food, activities, shelter, supervision, health care, and support systems. The nurse should be aware of different cultural, ethnic, or socioeconomic backgrounds of students.

Four Common Encounters in the School Health Office

The four most frequent conditions encountered in the school health office are headaches, sore throat, abdominal pain, and general malaise. The focus of this discussion is on the initial stage of assessment and does not include medical management. The following four examples of encounters were contributed by Simmons College Graduate Program in Primary Health Care Nursing and represent some suggested processes in assessing students. These guidelines are based on current references (see References) and the clinical experience of contributors. If any of these symptoms are brought to the attention of an untrained school staff member, that staff member should refer the student to a licensed professional health provider, i.e., school physician, registered nurse, or nurse practitioner.

Headaches

Headaches can be classified as acute, chronic, and recurrent. Acute headaches are of recent onset and frequently are associated with infectious illnesses such as colds and influenza. Chronic and recurrent headaches may be associated with stress and tension, migraines, or potentially serious medical problems such as sinusitis, dental problems, concussion, or brain lesion. Up to 20% of all school-aged children experience frequent, recurrent headaches.



Question (Subjective Data)

1. Name and age of student?
2. Has there been any recent head injury?
3. Where is the location of the headache? What is the severity? How long has the headache persisted?
4. Are there any associated symptoms: vomiting, stiff neck, difficulty with vision, drowsiness, recent behavior, or personality changes?
5. Does the child have any other serious chronic medical disorders?
6. How often does the child get headaches? What has made them feel worse or better?
7. Is the child feeling ill in any other way: sore throat, stomachache, chills?
8. Has the child eaten recently?

Action (Objective Data)

1. Check the temperature
2. Neck: Is there tenderness or pain on motion?
3. Eyes: Are the pupils equal in size?
4. Head: Are there any lacerations, bleeding, bumps, or bruises?

Assessment

1. Acute onset headache
2. Acute recurrent headache
3. Chronic nonprogressive headache (as a result of tension or stress)

Action

Obtain health record.

Examine the child's head for evidence of lacerations, bleeding, bumps, or bruises.

Any headaches that are characterized as severe, unilateral, or have persisted beyond 12 hours should be evaluated by a licensed provider immediately.

If positive, the child should be seen by a licensed provider immediately. These symptoms can be associated with a life-threatening infection such as meningitis.

If positive, there may be an association. The child should be evaluated by a licensed provider that same day.

There may be certain measures the child can take to treat the headache: lie down and rest, take acetaminophen, and apply a cool washcloth to forehead. Medication requires a licensed provider's order and parental consent.

Headaches can be associated with common infectious illnesses such as colds, strep, pharyngitis, or flu. The child should be seen by a licensed provider that same day for appropriate testing, diagnosis, and treatment.

Headaches may be associated with hypoglycemia.

Plan

If positive for temperature, tenderness or pain on motion of neck, inequality of pupils, or evidence of head trauma, the child needs to be evaluated by a licensed provider immediately.

Plan

This may be associated with infectious illnesses such as strep throat, colds or influenza.

This may be migrainous. A child who presents with a severe headache, should be sent home to be evaluated by a provider.

This may cause dull, constant pain, commonly located around the forehead and temporal area. The child can often alleviate the pain with rest, dim lighting, a cool washcloth, and acetaminophen. Medication requires a licensed provider's order and parental consent.



CHAPTER 5

Sore throat (Pharyngitis)

Infections of the throat may be caused by either viruses or bacteria, but the vast majority of infections are viral. Because it is not possible to know whether the infection is viral or bacterial by inspection, a referral for a throat culture may be necessary in order to identify an infection caused by bacteria, such as *Streptococcus*. An untreated strep throat can lead to serious complications, such as rheumatic fever or nephritis. Usually the results of throat cultures are available within 24 to 48 hours. Approximately 10 to 20% of children who present with sore throat have a *Streptococcus* infection (strep throat) as the cause of their pharyngitis. The typical incubation period for strep throat is 1 to 3 days. Viral infections of the throat usually last 3 to 4 days as part of a cold or upper respiratory infection.

Question (Subjective Data)

1. Name and age of student?
2. How long has the sore throat been present?
How severe is the discomfort?
3. Are there any associated symptoms; cold, cough?
4. Does the child have symptoms, such as headache, rash, chills, or abdominal pain?
5. Has the child had many sore throats or strep infections in the past?
6. Does the child have any serious chronic medical disorder, such as kidney disease, diabetes, or congenital heart disease?
7. Has the child had recent contact with anyone who has had strep throat or impetigo (skin infection caused by *Streptococcus*)?

Action (Objective Data)

1. Check the temperature.
2. Neck: Are the glands in the neck swollen and/or tender?
3. Mouth: Does the throat appear red? Are the tonsils enlarged? Is pus or exudate present on the throat or tonsils?

Action

- Obtain health record.
- Any sore throat that is characterized as very painful or has been present beyond 24 hours should be evaluated by a licensed provider that same day.
- Sore throat associated with upper respiratory symptoms is likely to be caused by a virus.
- Sore throat associated with these symptoms is more likely to be caused by bacteria.
- If positive, the child should have a throat culture in order to rule out strep throat, a potentially serious infection.
- If positive, the child should be evaluated by a licensed provider that same day.
- Sore throat following a recent contact with someone who had strep throat or impetigo warrants a throat culture in order to rule out *Streptococcus* as a cause of the pharyngitis.

Plan

- If positive for elevated temperature and enlarged and tender glands with a red and pus-like throat, the child needs to be evaluated by a provider.



Assessment

1. Viral infections

2. Bacterial infections

Plan

If there is no rash, fever, difficulty swallowing, swollen and tender glands, abdominal pain, or headache, the child most likely has a viral infection. The symptoms may be alleviated by taking acetaminophen, gargling with weak, warm salt water, and drinking some fluids. Medication requires a licensed provider order and parental consent.

Sore throat associated with symptoms such as fever, difficulty swallowing, swollen and tender glands, abdominal pain, rash, or headache is more likely to be caused by bacterial infections.

The child needs to have a throat culture performed. Usually the results are available within 24 to 48 hours. If positive, the child should be placed on antibiotics by his or her primary care provider. Children are considered not contagious *after 24 hours of antibiotic therapy*.

Abdominal Pain

Abdominal pain, usually classified as acute or recurrent, is a difficult complaint to assess. It can indicate a condition, like appendicitis, that may require surgery. Several conditions — urinary tract infections, gastroenteritis, or even pneumonia — can also mimic acute or serious abdominal problems like appendicitis.

Recurrent abdominal pain is also a challenge to diagnose since the child usually appears healthy but is complaining of severe pain. Chronic abdominal pain is classified as three or more episodes severe enough to interfere with activity occurring over a three-month period or longer. The etiology is usually unknown but may be psychosomatic in origin and associated with stress at home or in the classroom. (See Chapter 11 for more on psychosomatic illnesses.)

The true incidence of an acute abdominal pain caused by appendicitis is estimated at between 7 and 12%; 10 to 12% of school-aged children are affected by recurrent or chronic abdominal pain.

Question (Subjective Data)

1. Name and age of student?
2. Analyze the symptom. Have the child describe the pain, frequency, location, duration, if it radiates, and what makes it better or worse.
3. Is this a new complaint? If not, how many times has the child complained of this?
4. Does the child have associated symptoms: nausea, vomiting, diarrhea, constipation, decreased appetite?

Action

- Obtain school health record.
- Inspect the area for any obvious recent injury. If pain appears severe and is interfering with activities, the child should be referred to a licensed provider immediately.
- If this is a common complaint for this child, it may be indicative of stress-related illness, and the child could stay in school.
- If positive, these symptoms may indicate a viral infection but also may be indicative of an acute abdominal condition. Consult a licensed provider immediately.



CHAPTER 5

5. For girls: Is it associated with frequency or burning on urination? Is it associated with menses?

Urinary tract or vaginal infections need to be diagnosed and treated by a provider. If positive for the onset of menstrual period, rest, over-the-counter pain reliever (per school protocol or licensed prescriber's order, both with parental consent), and heat may be used to decrease pain and discomfort.

Action (Objective Data)

1. Check temperature and blood pressure.
2. Abdomen: Is pain localized? Does it radiate? Any signs of injury?
3. Is child pale? Sweaty?
4. Is mobility or activity severely restricted?

Assessment

1. Acute abdominal pain
2. Recurrent abdominal pain

Plan

If positive for temperature and other signs of severe pain, the child needs to be referred immediately to a licensed health care provider to rule out appendicitis or other emergency condition.

Plan

Appendicitis is the most common cause of acute abdominal pain.

Recurrent pain is associated with urinary tract infection, constipation, gastrointestinal viral infections, stress, and gynecological problems.

General Malaise: "I Don't Feel Well"

This complaint, frequently heard in school health offices, is vague and nonspecific, and can indicate a wide variety of problems, from specific physical problems to psychosomatic or stress-related ones.

School personnel need to obtain accurate information, since this complaint may not be the real reason the child is in the health office. The child may be using this complaint as a means of communicating an underlying problem to the nurse or school personnel. This assessment demands a thorough, skillful, and sensitive interview.

Question (Subjective Data)

1. The most efficient way to collect information of a physical nature is to review the body systems. This includes a review of past and present illnesses and usually proceeds head to toe.
2. Ask general questions: "Are you having any pain anywhere? Have you been sleeping? Any nausea, vomiting, diarrhea?"
3. Questions concerning family, home, school, and peers need to be open-ended and sensitive. "Has anything changed at home? How is school going?"

Action

Differentiate between physical and psychological etiology.

If positive, follow up with more complete information on specific area.

If positive, child might just need some "time out" in health office. Assess for further referral for counseling.



Action (Objective Data)

1. Check temperature.

Plan

If positive, this may indicate nonspecific viral or bacterial disease. Refine assessment and refer for further evaluation.

Assessment

1. Organic cause
2. Psychosomatic or stress related

Plan

Vague, nonspecific complaints can still be indicative of physical injuries and illnesses. These need to be ruled out by careful history and data collection before the assumption is made that the complaint is stress related.

Stress-related illness and chronic complaints warrant follow-up and counseling by school guidance counselors, if available or referral to community services.

POPULATION-BASED SCREENING PROGRAMS

General Guidelines

Population-based screening for health problems, an important component of a school health program, is designed to detect previously unrecognized conditions or preclinical illnesses as early as possible in order to provide early intervention and remediation and limit potential disability and negative impact on scholastic performance. The following guidelines are applicable to any screening program in either the school or community:

Assessment

The scope and nature of a screening program should be based on the documented health needs of the population served. These needs may have been identified by a state agency and may be mandated by statute or regulation, or they may be identified by local school or community health personnel, parents, students, or educators. Decisions should be based on the definition of the target population that is at risk for developing an illness or condition that is not likely to be detected unless the screening program is offered.

Caution must be observed by school and program planners in order to prevent abuse of students as a "captive population" by those who would promote screenings which serve little or no health benefit for the children themselves.

Planning

Careful planning is the key to an effective screening program. The time invested at the planning stage will make implementation easier and more accurate. The school nurse should play a major role in the planning phase and will need to spend the required time to develop a successful program. The following activities and/or decisions should be addressed during the planning phase:

- Determine the purpose of the screening program.
- Define the population to be screened.
- Decide which screening procedure or test to use.



- Ensure that adequate resources are available for equipment and supplies; staff training; and staff time to conduct tests and retests, record results, interpret them to students and families, and conduct follow-up.
- Determine referral criteria using standards set by MDPH for vision, hearing, and postural screening, and by the National Institutes of Health for high blood pressure, cholesterol, and other screenings.
- Collaborate with members of the school health team, including community health providers, regarding the following: criteria used for referral for diagnosis and treatment, decisions regarding who will be treated, and what resources are available for follow-up, especially for those who are uninsured.
- Plan the mechanics of the actual screening program, including determination of time required for screening, designating screening personnel, and deciding who will do the following:
 - Order supplies.
 - Ensure that the equipment is in good working order (e.g., audiometer, sphygmomanometer, or reflotron calibrated recently).
 - Obtain parental consent.
 - Train personnel.
 - Recruit, orient, and train volunteers, if used.
 - Arrange for space that is appropriate, quiet, and private.
 - Record findings.
 - Rescreen students with borderline or questionable results (school nurse usually does this).
 - Plan and complete the follow-up procedures.
 - Decide how to include content regarding the disease or condition and screening procedure into the health education curriculum
 - Determine how to evaluate and report the results of the screening program.

Implementation

Implementation begins with training the screening personnel or arranging for training of staff (nurses, health aides, physical education teachers, volunteers, etc.). It encompasses the following steps as well:

- Perform the actual screening as planned.
- Document all test results on student health records.

- Refer for follow-up all those who fail to meet the criteria.
- Notify parent or guardian by letter and telephone call if appropriate.
- Notify medical provider by letter, usually via parent or guardian.

Follow-up

Follow-up is a critically important step. This is the point at which early diagnosis and prompt treatment can effect a remediation of the problem *before* it becomes a disability and/or more costly to treat.

- Obtain reports from the medical provider or other related professionals such as audiologists or optometrists regarding diagnosis, treatment, and follow-up care.
- Continue contact with parents or guardians (including home visits or telephone calls) until follow-up is achieved.
- Interpret outcomes to student and parents or guardians.
- Communicate as needed with educational staff.
- Ensure confidential data handling.
- Attach follow-up medical reports to the health record.

Evaluation

Use evaluative outcome criteria that focus on the results of the program, measure behaviors, and give dates by which behaviors occur. Tally test data by grade; compare results to expected results based on national or state data. Finally, compare completed referrals to a set goal (e.g., “75% of referrals will be completed”). Work toward increasing the percentage of completed referrals.

Effective screening programs are likely to identify health problems that otherwise would not be identified until a later date, when treatment is less effective or more costly. Screening does not substitute for a diagnostic evaluation. *It is extremely important to recognize that it is a waste of time and resources to do screening if appropriate referral and follow-up are not carried out effectively.* Screening and follow-up are essential roles of the school health program.

Waiver Procedure

Waivers for some types of screening are available in order to make local school health programs more relevant to the community. Procedures for reviewing waiver requests have been developed by MDPH under amended Regulation 9 of the Regulations for Physical Examination of School Children (M.G.L. c. 71, s. 57) and may be obtained by contacting the regional school health advisors.



CHAPTER 5

Height and Weight Screening

Annual height and weight measurements provide a simple but effective method of detecting growth abnormalities in children, which may indicate a serious physical problem. Poor growth patterns can result from systemic disorders (e.g., malnutrition, intestinal conditions), psychosocial conditions, congenital disorders (e.g., Turner's syndrome, intrauterine growth retardation), or conditions of the endocrine system (e.g., hypothyroidism, growth hormone deficiency). (See Chapter 9.)

The range of normal height and weight varies for each child, but general growth remains relatively constant. After rapid growth in the first two years of life, growth generally slows down to 2 to 2½ inches per year until puberty (approximately ages 11 to 13 years). Growth dramatically increases during puberty and lasts about two years until sexual development is achieved. At this point, the child's growth is nearly completed. Growth patterns should follow the normal growth curves of children of the same age and sex and fall between the fifth and ninety-fifth percentile curves on the standard growth chart.

Authorization

M.G.L. c. 71, s. 57, as amended, requires that, in the absence of a waiver, school-aged children be weighed and measured annually.

Procedure

Applying appropriate measuring techniques and using well-calibrated equipment is essential. This includes positioning the child correctly on the weighing scale and against the measuring tape when determining height. The measurements should be repeated, if possible one to three times, to ensure reliability. It is a good idea to have one person responsible for taking heights and weights, as measurements taken by different individuals may vary.

Growth must be charted on a graph so it can be meaningfully interpreted by health care providers. It is important to note if a child's growth pattern makes a major shift from one curve to another. For example, a child's growth pattern that is usually at the eightieth percentile but drops to the fiftieth percentile indicates a reason to investigate. A child whose growth pattern is at the fiftieth percentile and remains constant over time usually indicates no cause for concern.

It is preferable to provide privacy when weighing and measuring individuals to reduce embarrassment and/or ridicule. Also, this offers an opportunity for identifying child's health concerns and for a brief one-to-one teaching of nutrition, exercise, and other components of health.

Personnel

The nurse is responsible for overseeing this screening but may delegate the task to properly trained unlicensed personnel such as health aides or physical education teachers.

Standards

To be useful, measurements should be both accurate and plotted on standardized National Center for Health Statistics (NCHS) sex-specific



growth charts (see Exhibit 2-22 in Chapter 2). Height and weight are plotted against age and compared with standardized percentiles as well as previous measurements.

Equipment

Equipment should include a beam balance scale with nondetachable weights and a nonstretchable tape attached to a vertical, flat surface such as a wall. A right-angle head board is also needed for lowering onto the child's head when taking the measurement.

Referral and Follow-up

The school nurse is in an ideal position to ensure the early identification of children at risk for growth problems by providing appropriate assessments and referrals. Children should be referred for further assessment when the following measurements are noted:

- Weight for height or for age is more than the ninety-fifth percentile.
- Weight for height, weight for age, or height for age is less than the fifth percentile.
- Child's growth pattern changes dramatically, for example, a child who has been consistently at the fiftieth percentile drops to the tenth percentile or rises to the ninetieth.

Record Keeping and Documentation

The growth chart should be part of the health record. In addition, the summary results should be recorded on the student's health record, including any indication of referral and follow-up.

Hearing Screening

The purpose of the hearing screening program is to identify children with an educationally significant hearing impairment who would otherwise not have been identified. Identification should ensure timely remediation or treatment in order to eliminate or lessen the negative effects of an undetected hearing problem. Any significant loss in hearing sensitivity will influence the overall educational process for the child.

Hearing loss or impairment has been described as a "hidden handicap" or a "quiet debilitator." Defects in this important sense may be so subtle that they are generally overlooked yet have significant negative educational implications for the student. The school's hearing screening program has a vital role to play in helping to ensure that no student has an undetected, and therefore unmanaged, hearing problem.

Most children with significant hearing loss are identified before school entry; however, many children with mild to moderate losses, usually of a conductive nature and perhaps of a temporary nature, may go undetected until school enrollment and participation in the school's hearing screening program.

Any hearing loss may have a negative effect on a child's ability to communicate effectively and achieve academically. The effects of a hearing loss are variable, depending on the nature and the degree of



loss, as well as the appropriateness of the interventions. An undetected or unmanaged hearing loss may result in:

- A delay in speech and language skills.
- Language deficits, which may lead to learning problems and limited academic achievement.
- Difficulties in communication, which may lead to social isolation and poor self concept, resulting in emotional/behavioral problems.
- A negative impact on the child's vocational and educational choices.

Authorization

M.G.L., c. 71, s. 57, as amended, requires that, in the absence of a waiver, the hearing of every public school child be screened annually. Regulations developed under the Comprehensive Special Education Law, Chap. 766 p. 306, 1(D) specify that children with special needs or children whose parent or guardian suspects may have a hearing problem must be given a test for auditory functioning appropriate to the age and development of the child, beginning with the third birthday.

Procedures

A manual developed by the Vision and Hearing Section of the MDPH School Health Unit, *Individual Pure Tone Hearing Test Procedures*, is distributed to personnel who attend training sessions given by the MDPH staff. The manual is intended for use by staff conducting hearing screenings in the school setting and deals primarily with procedures for individual pure tone hearing testing recommended by MDPH. In the event that group testing is done by necessity, it is important that a child who fails the group test be given an individual puretone test *before notification of the parent or guardian*. The manual also deals with the proper care of the audiometer and referral guidelines. A copy of the manual should be available in every school system.

Personnel

The assignment of personnel to the hearing screening function is a local responsibility. However, MDPH's School Health Unit encourages the certification of ancillary staff such as health aides or selected lay-people as hearing screeners. Professional staff activities are more appropriately used to supervise the screening program, perform repeat screenings when necessary, and carry out the necessary referral and follow-up when a child fails the hearing screening.

MDPH is mandated to assist public school systems in carrying out their responsibilities by developing the requirements of the hearing screening program, providing training sessions for personnel assigned to do hearing screening, and certifying screeners upon completion of the training program. Training sessions for the certification of hearing screeners are held periodically during the school year throughout the Commonwealth by MDPH.



Standards

An advisory committee of specialists in otology and audiology assisted MDPH in updating standards for screening procedures, appropriate use and care of the audiometer, and guidelines for referrals. The manual provided to attendees at the hearing training sessions gives an overview of procedures to be used in providing individual pure tone hearing testing.

Equipment

The audiometer used in school-based hearing screening programs must meet the standards for screening audiometers established by the American National Standards Institute (ANSI). It must have the air conduction frequencies of 500, 1000, 2000, and 4000 hertz. Screening audiometers are quite fragile, so proper handling and transport are essential to ensure accurate readings from a properly calibrated machine.

Consultation and advice on the purchase and maintenance of screening audiometers is also available from the MDPH School Health Unit.

Referral and Follow-up

Appropriate medical and audiological follow-up and referrals are central to an effective system. In general, all children who fail the initial screening must be retested before being considered a candidate for a notice to the parent or guardian. A repeat failure of the screening indicates that there is sufficient deviation from the norm in the results of the screening test to justify parental notification.

The typical failure rate in a screened population is approximately 2 1/2 to 3%. If the findings of the hearing screening vary significantly from this (either consistently higher or lower), a review should include, at a minimum, the skill of the tester, the appropriateness of the testing site (i.e., presence of ambient noise), the condition of the audiometer, and an evaluation of the testing procedures. Screening tests are not diagnostic. They merely identify students who may need further attention by a primary caregiver or hearing specialist.

Record Keeping and Documentation

All results of the hearing screening program — passes as well as failures — should be recorded on the child's School Health Record Card (PH-M-1). In the event that parental notification is required, the school health staff should make every attempt to determine whether the primary caregiver was consulted by the parent or guardian and whether determination was made of a resolution of the apparent hearing problem or educational adjustments, if recommended.

References and Resources

Consultation and guidance are available to school personnel through the MDPH School Health Unit on appropriate modifications to the school's program, as well as on the purchase and maintenance of audiometric equipment. Specific publications dealing with the potential for hearing loss in the school setting from live or recorded music, use of Walkman-type receivers, and equipment in some vocational schools are available upon request.



The Classroom Teacher's Role

Classroom teachers have the opportunity of observing the student daily over an extended period of time, and may be in the best position to notice signs of unusual reactions, conditions, or behavior change that may signal a hearing problem. Teacher observation may be a significant source of early identification of children experiencing hearing difficulties. A referral to the school nurse should be made when any hearing problem is suspected. Hearing problems may be indicated when the student:

- Does not respond to normal speech.
- Favors one ear (indicated by turning one ear to speaker).
- Speaks too loudly or too softly.
- Strains to hear the speaker.
- Displays intense concentration on the speaker's mouth or face.
- Is inattentive in oral activities.
- Frequently asks to have words or statements repeated.
- Mispronounces common words.
- Makes frequent or unusual mistakes in following directions.
- Regresses academically subsequent to a serious illness.
- Is not reaching his or her academic potential.

Vision Screening

The purpose of vision screening is to identify children who may have vision impairment that might prevent them from obtaining maximum benefit from their educational opportunities.

Authorization

M.G.L. c. 71, s. 57, as amended, requires that, in the absence of a waiver, the vision of all public school children be screened every year. In addition, regulations developed under the Comprehensive Special Education Law, C. 766, paragraphs 306.1(c) and 306.2, specify that children with special needs from the age of 3 must be identified. Assessments of visual function, appropriate to the age and development of such children, must be incorporated as part of the total evaluation.

Procedure

Two types of vision screening procedures are used in the Commonwealth's public schools:

- *Preschool:* Preschoolers and those entering kindergarten are screened using National Society to Prevent Blindness procedures, which utilize the Snellen E test symbol. The orientation procedures and referral

standards are age appropriate and differ significantly from the screening administered to students in grades 1–12.

- *Grades 1-12:* All vision screening in the public schools of the Commonwealth uses the official Massachusetts Vision Test protocol.

Personnel

According to state health regulations, teachers, physicians, optometrists, nurses, or other personnel may be designated by the school committee or the local board of health to give vision tests. Approval of the assignments is granted by MDPH after training to ensure uniformity of screening procedures and referral criteria statewide.

After trained personnel conduct the initial screening, the school nurse or physician retest certain students, if indicated. Although parents have total discretion regarding further follow-up, the school nurse plays a vital role in interpreting the importance of the need for follow-up when indicated.

Standards

Screening procedures and referral criteria used with both preschool and schoolage students have been approved by the Massachusetts Ophthalmological Society's Committee on School Health.

Equipment

There are currently three approved vision screening devices available from different manufacturers of vision testing equipment. To ensure valid test results, it is very important that all vision screening equipment be properly maintained.

Referral and Follow-up

Parents of all children who do not perform satisfactorily on a vision screening and subsequent retest are notified by school health personnel. On average, approximately 7 to 8% of students screened nationwide are referred for further evaluation. A referral means only that there is sufficient deviation in the child's visual condition to justify a more complete examination by a qualified eye specialist. Therefore, good follow-up procedures are vital if all children who are suspected of having visual problems are to be brought to the attention of a competent specialist for diagnosis and therapy, if required. A specialist may also recommend appropriate educational adjustments to be initiated by school personnel. These recommendations should be made in concert with the child's primary care provider.

Screening tests are not diagnostic in nature. They are designed simply to indicate students who may need further attention. For this reason, it is imperative that school personnel not make any attempt at diagnosis when contacting the parents of a child who does not meet the screening criteria.



Record Keeping and Documentation

All vision screening results — passes as well as failures — should be recorded on the child's School Health Record Card (PH-M-1). If the referral confirms a vision problem, the School Health Record Card should also indicate the nature of the abnormality as determined by the specialist, and a complete record of any treatment prescribed.

The law was amended in 1987 (M.G.L. c. 71, s. 57, as amended) to require that any person who conducts an eye exam of a child referred through a school screening program is to report the results to school health personnel, and a copy of the report must go to the student's parent or guardian. The report must include but is not limited to the following:

- Date of report.
- Name and address of child.
- Name of child's school.
- Type of examination.
- Summary of significant findings, including diagnoses, medication, duration of medication's action, prognosis, whether a return visit is recommended and, if so, when.
- Recommended educational adjustments for the child, if any, which may include preferential seating in the classroom, eyeglasses for full- or part-time use in school and/or at home, the use of low-vision aids, or any other recommendations.
- Name, address, and signature of the examiner.

References and Resources

Technical consultation is available to agencies purchasing new vision screening equipment or those wishing to modify their programs. They may contact the MDPH School Health Unit.

The purpose of postural screening is threefold: (1) to detect early signs of spinal problems that should have further medical evaluation, (2) to provide regular monitoring, and (3) to reduce the need for surgical remedies. Screening must be done annually in grades 5 through 9 (approximately ages 10–14) because young people in this age range are in a growth spurt, and they mature at different rates.

Authorization

Since April 1980, M.G.L. c. 71, s. 57 requires all public school systems in the Commonwealth to provide postural screening to all students in grades 5 through 9. If a parent or guardian refuses to have a postural screening by the school, written documentation provided by the family physician must be submitted to the school nurse.

Background

A curve in the spine has been known throughout history as “hunch-back,” “round-back,” “swayback,” or simply “bad posture.” In the

Postural and Scoliosis Screening



past, these conditions often went unrecognized or were already severe when detected, and then often went untreated.

There are two major types of spine curvature. *Scoliosis* is a lateral curvature of the spine, a protrusion off to the side. Signs of scoliosis occur in about 10% of the population, although only about 2 to 3% develop a condition that requires medical treatment. Scoliosis that goes on to require treatment affects girls about eight times more often than it does boys. Scoliosis may have a familial hereditary basis, but the cause of most scoliosis is unknown.

The second type, *Kyphosis*, is a front-to-back curvature in which the protrusion is in the midline of the back. Kyphosis, not as prevalent as scoliosis, affects boys slightly more often than girls.

There is no known way to prevent scoliosis and kyphosis, but to prevent these curves from becoming severe problems, early detection and prompt treatment are advisable. The goal is to obtain treatment when curves are minor and, whenever possible, prevent them from becoming severe.

Procedure

The screening program has two components: (1) an initial educational session with each class held by a screener, and (2) the screening itself. An educational session includes information on when, where, and how the screening will be done; what the screener looks for; special clothes to be worn during the screening; a short discussion of postural problems; review of other information; and distribution of the initial letter to parents (Exhibit 5-2).

The initial classroom contact should be done by a trained health care professional, such as a school nurse, who can inform the class about the specifics of screening. This person should seek to convey a positive attitude toward the program and its preventive nature, emphasizing the student's own self-interest in having a screening.

Girls and boys are screened separately, with an adult screener of the same gender as the student. For optimal viewing of the spine, the student's back should be bare. Therefore, girls are asked to wear halter tops and shorts or a bathing suit (extra tops should be available). One minute or less per student is generally the time required for screening. (This varies with experience, with novice screeners taking 2 to 3 minutes per student.) A schedule for screening should be prepared and coordinated in advance with the various classroom teachers.

Personnel

MDPH recommends that one person within the school, usually the school nurse, coordinate all the activities related to the screening program — materials, equipment, and space; the education and cooperation of other staff; student screening; the use of instructional materials; access to materials for interested community members; and record keeping. MDPH protocols indicate that a physical education instructor should do the initial screening, with a school nurse conducting the follow-up screening, and health educators and classroom teachers providing instructional backup.



The school physician may wish to make it known to colleagues in the community that the school is carrying out a postural screening program and prepare them to receive referrals. The school physician may also participate in rescreening before referrals are made.

Individuals who conduct the screening should receive training offered through MDPH and use materials contained in a guide published by MDPH to assist in implementing a postural screening program.

Referral and Follow-up

Children with positive findings should be scheduled for a rescreening. Typically, one in ten students is targeted for referral after rescreening. If a positive finding is confirmed by another person who does the rescreening, the family should be contacted by the school by phone and letter. A follow-up letter should be sent to the parents, who can then give the letter to the child's physician. If early signs are detected, the family should be encouraged to seek further review by a family physician.

Record Keeping and Documentation

MDPH provides a postural screening worksheet on which to document positions in which the student is viewed by the screener, any positive findings, and follow-up. A postural screening summary report is also provided on which to report number of students screened, number under treatment, number referred for rescreening, results of physicians' examinations, and comments. A single annual summary postural screening is to be submitted to the School Health Unit of MDPH by each school district annually.

Lead Blood Screening

Authorization

Massachusetts law and regulations (105CMR 460.050, and .060) requires universal, periodic blood lead screening for preschool children and it requires that each child's level of risk of lead poisoning be evaluated. It also requires that children present evidence of having been previously screened for lead poisoning as a condition for entry into kindergarten.

Background

Virtually all children in the U.S. are at risk for lead poisoning, and, while the disease is largely preventable, the number of lead-poisoned children is on the rise. In Massachusetts, public health statistics indicate that cases of lead poisoning detected among children increased 16% between 1992 and 1993. Lead poisoning — too much lead in the body — can cause learning disabilities, behavioral problems, and, at very high blood lead levels, mental retardation and kidney disease. Even at blood lead levels once thought harmless, lead poisoning can affect development and interfere with a child's ability to achieve in school. In most cases, children with lead poisoning show no or very non-specific symptoms. A blood lead screening test is the only way to determine if a child has been exposed to dangerous levels of lead.

A recent study of 200 children found that children with moderate blood lead elevations were seven times more likely to drop out of high school, six times more likely to receive special education services, and twice as likely to repeat a grade in school. Hyperactivity,



attentional deficit, and vocabulary delay are often associated with lead poisoning. Since these problems may not be readily identified before a child is three years old, testing through programs such as the early toddler screening program may be the best mechanism for ensuring that children with special needs are identified and receive needed services.

Sources of Lead

The most common source of lead poisoning is lead-based paint, which contributes to other sources of lead poisoning such as lead-contaminated household dust and soil. Since there was no effective ban on the use of lead-based paint until 1977, most older Massachusetts homes and public buildings (approximately 60%) still have layers of lead-based paint. Children become lead-poisoned from eating, chewing, or sucking on accessible lead-painted surfaces or items coated with lead dust. Rehabilitation and remodeling of these older homes is another way in which children are exposed to lead. Typical sources that children often encounter during play include railings, window wells and sills, door sills, toys, furniture, and jewelry. Children who touch things with sticky fingers are more likely to pick up the contaminated dust or material.

Soil is often overlooked as a source of lead. Soil is contaminated by paint which has weathered or been scraped or sanded off buildings. Airborne lead from auto exhaust and from stationary sources such as smelters and refineries can also increase the lead content of soil and dust. Children playing outdoors who get dirt on their hands, and then put their hands in their mouths, can become lead poisoned. Lead is most highly concentrated in house dust and in soil within three feet of a building, or in areas close to busy streets, parking lots, and driveways.

Adults working in lead-related jobs or crafts can also contribute to a child's exposure by bringing home lead dust on their clothes, hands, and hair. Drinking water and canned foods containing lead are additional secondary sources of elevated levels.

Who Is at Risk

Children ages 6 months to 72 months of age who (1) live in, or frequently visit, housing built before 1978 which is dilapidated or undergoing renovation; (2) have siblings or housemates who are lead poisoned; (3) have adult family members who engage in lead-related hobbies or occupations; or (4) live near industries likely to result in atmospheric lead release are considered at high risk for exposure. Parents are often asked a few basic questions which help establish risk. All children should be screened at least once a year between the ages of 9 months and 4 years. At-risk children should be screened more frequently.

Procedure

A lead screening test is done by pricking the finger, taking a small amount of blood and analyzing that blood sample. If the screening test is positive, it will have to be confirmed by further testing. Screening should take place between May and October, as lead levels tend to be higher in the summer months.



In 1991, the U.S. Centers for Disease Control and Prevention recommended that children be screened for lead poisoning using a direct blood lead test. The Massachusetts Childhood Lead Poisoning Prevention Program provides a direct lead test for all children's samples. Other screening tests, such as the erythrocyte protoporphyrin (EP) test, will not identify children with mild to moderate lead exposure.

Personnel

Primary health care providers are responsible for ensuring that testing is available to all children in their care. This includes community health centers, hospitals and private physicians.

Referral or Treatment and Follow-up

Children with elevated blood lead levels (20 micrograms per deciliter or higher) are enrolled in the MDPH case management system and receive coordinated medical and environmental follow-up. MDPH regionally-based nurses contact primary health care providers and develop a plan for each child.

The most important steps in the treatment of lead poisoning are the identification and removal of sources of lead, thus eliminating further exposure. The homes of children with elevated levels are referred to certified code enforcement inspectors who will test surfaces for lead paint. If lead paint is present on chewable, accessible surfaces to a height of five feet, any part of a window, or if paint is peeling on other surfaces, the property owner will be cited for violation of the lead paint law (M.G.L. c. 111, s. 197).

Property owners are required to hire certified deleaders to remove lead paint violations. Paint may be stripped from the substrate, permanently covered with products such as wall board or aluminum siding or a structural unit such as a window may be replaced. If violations are not corrected in 30 days, criminal charges will be sought against the property owner. Tenant families are protected from eviction, retaliatory rent increases, and discriminatory rental practices.

Children with persistently elevated blood lead levels may receive chelation therapy. Chelation, from the Greek word "claw," causes the body to release lead stored in the blood and soft tissue and to be passed through the kidneys and excreted through the urine. Several different chelating agents are available. Depending on the blood lead level and other factors, a child may be chelated using pills or a series of injections. The injection treatment, which usually consists of daily injections for five days either into a muscle or through the vein, can be done in a hospital or through a clinic. Children who have high lead levels may require more than one course of treatment.

Chelating agents lower the child's blood lead level and may limit future damage to the central nervous system. There is no evidence that chelating agents can reverse damage caused before the child is treated. Following the diagnosis and treatment of lead poisoning, children must continue to have frequent blood-lead tests to determine if additional treatment is necessary or to detect evidence of re-exposure.



Record Keeping and Documentation

Results of lead screenings and assessments should be kept in the child's school health record.

Dental Screening

Dental screening is designed to detect early dental or oral health problems of children. It is also an opportunity for individual dental health education, and it helps build a positive attitude in children who have not received prior dental care. Finally, it provides base-line information so referrals and periodic evaluation may be made. Dental screening is necessary to detect cavities or oral health problems, but it does not replace a complete examination in a dentist's office. (See Chapter 15 for a discussion of prevention and remediation of oral health problems.)

Authorization

Massachusetts does *not* specifically mandate that children entering school have a dental examination. However, MDPH strongly recommends that children be screened before entering school and then again in third grade and seventh grade. Dental screening can be linked to other medical requirements for children entering school, such as vision and auditory screening and immunizations.

Procedure

The most feasible and appropriate type of screening in the school is inspection using mouth tongue blades and adequate illumination. This procedure can detect tooth decay and gum problems (mild gingivitis); it is recommended by the American Dental Association. A child will require review later since interproximal caries can be detected in the early stages only by X-ray. However, simple screening procedures identify major dental needs in most instances and are excellent vehicles for individual health education.

This procedure is much more effective than the "look-see" approach (a screening using just a tongue depressor and available illumination), which can detect only very obvious dental problems. The purpose of either of the two methods is to find any problems and then refer the child out to a dentist. Complete dental examinations with X-rays are most appropriately conducted in a licensed dental office.

Personnel

Either a dental hygienist or a dentist can perform the inspection with mouth mirror and explorer. A nurse may perform the tongue blade screening.

Referral and Follow-up

The Dental Certificate Program in Massachusetts is part of the dental screening process and helps the school maintain a record of students' oral health. MDPH will send dental certificates ("orange cards") to schools upon request.

MDPH recommends that the dental certificate be mailed annually to parents. When a school screening has revealed a dental problem, the child should visit a dentist, accompanied by a parent who brings along the certificate. The certificate should be completed and signed by the local dentist and given back to the parent to return to the school.



Follow-up by the school nurse is extremely important to help families overcome barriers they may face in obtaining dental care. For families who cannot afford regular dental care, the school nurse should contact the local dental society and inquire about dentists who accept Medicaid or who will perform dental services on a sliding-fee scale.

Record Keeping and Documentation

The dental certificate becomes part of the student's health record. Nurses should also inform the child's teacher of any dental or other oral problems that may affect the child in school.

The Teacher's Role

Teachers play an important role in the promotion of a child's oral health by being aware of children who are in pain or have speech defects that may be attributed to missing teeth. Teachers can reinforce the importance of daily brushing and other good oral hygiene practices. Also, because teachers see students daily, they may be aware of behavior that may cause dental or speech problems, such as finger sucking and nail biting. Some children may need more time to eat their lunch if they have oral infections or are missing teeth, particularly front teeth or back teeth. The nurse should inform teachers of any problems affecting students. (See also Chapters 3 and 15 for guidelines for health education.)

Blood Pressure Assessment

Blood pressure assessment provides a physiological indicator of cardiovascular status. Elevated blood pressure is a risk factor for the development of hypertension itself or the development of premature cardiovascular morbidity, if not during childhood, then during adulthood. Prevention of hypertension in childhood and adolescence could extend the years of healthy life for many Americans. Proper diet, regular exercise, and not smoking are important in helping to maintain normal blood pressure.

Authorization

There is no specific legal mandate to provide blood pressure screening. Blood pressure measurement should be included in the physical examination as part of the continuing care of the child, not as an isolated screening procedure. Trained health personnel should follow standard practices for procedures, equipment, referral, and follow-up.

Cholesterol Screening

The purpose of cholesterol screening is to determine if students have elevated blood cholesterol levels and other risk factors for coronary heart disease. There are indications that atherosclerosis begins in childhood and that this process is related to elevated levels of blood cholesterol. Furthermore, these cholesterol levels may predict elevated blood cholesterol in adulthood. Prevention or slowing of the atherosclerotic process in childhood and adolescence could extend the years of healthy life for many people.

Cholesterol screening is designed to indicate students who may require further evaluations; it does not diagnose disease. Thus, preliminary screening does not verify elevated cholesterol levels or risk for coronary heart disease (CHD).



Authorization

Massachusetts does not require cholesterol screening of school-aged children. An individualized approach to preventing high cholesterol aims to identify and treat children and adolescents who are at the greatest risk of having high blood cholesterol as adults and who therefore have an increased risk of CHD. The National Cholesterol Education Program (NCEP) Report of Expert Panel on Blood Cholesterol Levels in Children and Adolescents recommends selectively screening children and adolescents in the context of regular health care, who have a family history of premature cardiovascular disease or at least one parent with high blood cholesterol. Cholesterol screening usually does not take place in schools; it must be done by facilities that are approved by MDPH. Examples of groups or facilities that may receive such approval are the Visiting Nurses Association (VNA), home health agencies, hospitals, and clinical laboratories.

NCEP recommends selective screening of the following:

- Children and adolescents whose parents or grandparents at 55 years of age or less underwent diagnostic coronary arteriography and were found to have coronary atherosclerosis, angina pectoris, or suffered a documented myocardial infarction.
- The offspring of a parent who has been found to have blood cholesterol level greater than 240 mg/dL.
- Children and adolescents, particularly those with other risk factors for CHD, whose parental or grandparental history is unobtainable.

While it may be difficult to determine students in these three groups due to lack of information about health status and family history, the population approach can serve as the principal means for preventing CHD by aiming to lower the average levels of blood cholesterol among *all* American children and adolescents through population-wide changes in nutrient intake and eating patterns. (See Chapters 3 and 9 for more information on nutrition.)

PHYSICAL EXAMINATION

A periodic physical examination is critically important for all children and adolescents, and especially for those who do not have primary care providers. The physical examination is crucial for preventive, diagnostic, or corrective purposes. Its objectives are to understand and follow up on health conditions that may adversely affect the student's well-being and ability to learn. While parents have primary responsibility for their children's health, the school is responsible for the safety and well-being of students while they are in the school setting. Therefore, the physical exam is the joint responsibility of the school and the family. Adequate and appropriate follow-up is necessary to ensure that all school children have a periodic physical examination.



Authorization

M.G.L. c. 71, s. 57 and related amendments and regulations (105 CMR 200.000-200.920) require physical examinations of school children within six months before entry into school or during the first year after entrance, and at intervals of either three or four years thereafter, such as during kindergarten, fourth grade, seventh grade, and tenth grade. It is the responsibility of the school committee to designate these intervals. In addition, physical examinations are required annually before participating in competitive sports, for children between 14 and 16 years of age requesting work permits, and when specifically requested by parents and teachers.

Procedure

Physicians should follow the guidelines of the American Academy of Pediatrics for conducting a comprehensive physical examination. For school-based physical examinations, each child should be separately and carefully examined by the physician or primary care provider. If a student is unable to obtain a physical examination with a primary care provider in the community, the school will do one. Physical exams completed in school should be done in the presence of a third person (usually the school nurse), in a private setting, and with sufficient time allotted for an appraisal of both physical and mental health. The student should be undressed sufficiently to permit an adequate assessment.

Written notification of the parents is necessary. The parent is welcome to be at the physical examination, and the appraisal should include time for a conference with the parent or child concerning the child's growth and development and the findings of the health appraisal.

Personnel

A registered physician or, in certain instances, a nurse practitioner who is licensed to practice in Massachusetts, is responsible for conducting physical examinations. The school health program should encourage the performance of the health assessment by the family's own physician whenever possible. School-based health centers may also be available to conduct examinations. When nurse practitioners are part of the school-based health center (SBHC) provider group, the physical examinations they conduct are accepted by MDPH.

The school committee or board of health is required to provide the services of a school physician to carry out physical exams on children who do not have access to a private primary care provider (M.G.L. c. 71, s. 53 and 57). Some schools refer students to a pediatric group in the community. Exams by nurse practitioners other than those practicing in a SBHC require a waiver from MDPH.

Referral and Follow-up

Any issues noted during the physical examination may require referral or follow-up. The school nurse is responsible for tracking such referrals and collaborating with parents.

Record Keeping and Documentation

Information concerning a student's past health experience assists health and school personnel to understand the student's present status; this information is a prerequisite to the health appraisal.



Before the medical examination, the nurse should obtain information about the following:

- history of infectious diseases
- immunization status
- any serious operation or disabling condition
- eating disorders, food allergies, or special diets
- current health conditions/problems
- results of dental, vision, hearing, height/weight screenings
- unusual patterns of school attendance
- family history

In order to carry out an effective school health program, the health staff must obtain as much of the child's medical history as possible.

The results of the family physician's examination should be recorded on health record forms developed by MDPH (see Chapter 2), with a copy of this record and the physician's recommendation returned to the school. The family physician performing the health appraisal of a school child should be furnished with a copy of the record of screening tests performed in the school.

Assessment findings should be recorded on each student's cumulative health record, which accompanies the student as he or she is promoted or transferred from one school to another. (See Chapter 2 for further discussion of health records.)

The Teacher's Role

Classroom teachers are key in the health appraisal process because their day-to-day contact with students gives them an opportunity to detect deviations in the health of individual children that might go unnoticed by others. Teachers are able to evaluate students in relation to their past history and progress and in relation to their peers. Teachers cannot make diagnoses but should refer to the school nurse for further consideration and follow-up of any student who is exhibiting signs of physical or emotional distress.

Periodic teacher-nurse conferences should be planned throughout the school year. The first conference in preparation for medical examination should be to discuss the results of the screening tests before the physician sees the child and to discuss problems of individual children the teacher may have observed. Additional conferences concerning individual children should take place as needed. The nurse should recommunicate to the teacher the student's health issues, as appropriate to his or her classroom program management. This, of course, assumes that parental consent is given and that confidentiality is maintained.

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CHAPTER 5

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RESOURCES

Blood Pressure Assessment

Reference documents can be obtained from:

Health Promotion and Chronic Disease Prevention Unit
MDPH
150 Tremont Street
Boston, MA 02111
(617) 727-0944

Cholesterol Screening

Consultation and guidance is available to schools that wish to contract with an approved agency to provide the screening. Printed material, leaflets, and other health education material regarding cholesterol are available from:

Health Promotion and Chronic Disease Prevention Unit
MDPH
150 Tremont Street
Boston, MA 02111
(617) 727-0944

Dental Screening

School personnel may obtain the dental certificates free of charge from:

Office of Dental Health
MDPH
150 Tremont Street
Boston, MA 02111
(617) 727-0732



Height and Weight Screening

Office of Nutrition
MDPH
150 Tremont Street, Boston, MA 02111
(617) 727-9283

Lead

To request a brochure on lead poisoning facts and guidelines, or for information on soil testing offered by Coop Extension, contact:

Childhood Lead Poisoning Prevention Program
MDPH
305 South Street
Jamaica Plain, MA 02130
1-800-532-9571

Postural Screening

Requests for training and approval of screeners may be made by contacting:

School Health Unit
MDPH
150 Tremont Street
Boston, MA 02111
(617) 727-0941

MDPH has a very limited supply of the video *Growing Straighter and Stronger* developed by the National Scoliosis Foundation. The department loans these videos on a first come, first served basis. MDPH encourages individual school systems to purchase their own video by contacting:

National Scoliosis Foundation
72 Mount Auburn Street
Watertown, MA 02172
(617) 926-0397
Fax (617) 926-0398

Preschool Assessment

Preschool Function Program
Children's Hospital
300 Longwood Avenue
Boston, MA 02115
(617) 735-7971

Vision and Hearing Screening

Training session requests and registration for certification should be made by the appropriate local school or health administrator to:

School Health Unit
MDPH
150 Tremont Street
Boston, MA 02111
(617) 727-0941

For printed materials, leaflets, and other health education material regarding vision screening, contact:

National Society to Prevent Blindness
500 East Remington Road
Schaumburg, IL 60173
(312) 843-2020



CHAPTER 5

EXHIBIT 5-1

Sample Student Health Encounter Form

Name: _____ D.O.B.: _____ Date: _____ School: _____ Room# _____

PROVIDER ☐ Nurse ☐ Aide ☐ School Staff Signature _____

Complaint _____

Observation _____

Presenting Problem

☐ cold ☐ stomach ache ☐ headache ☐ asthma ☐ allergy ☐ nosebleed

☐ sore throat ☐ pink eye ☐ cramps ☐ insect bites ☐ rash ☐ diarrhea

☐ other

☐ injury at school ☐ laceration ☐ splinter ☐ puncture

☐ bruise ☐ abrasion ☐ possible fracture ☐ sprain

☐ burn ☐ other

☐ injury not at school

☐ dental ☐ toothache ☐ other

☐ school physical ☐ hearing ☐ vision ☐ scoliosis screening

☐ emotional problem ☐ violence to other

☐ possible abuse ☐ possible neglect

☐ immunization

☐ temperature ☐ B.P. ☐ Height ☐ Weight

Nursing Assessment _____

Treatment/action taken

☐ counseling ☐ cleaned ☐ Band-aids ☐ ice ☐ rest

☐ 51-A ☐ accident report ☐ lice checks/follow-up

☐ medication ☐ team mtg.

☐ transport EW

☐ conference ☐ teacher ☐ parent ☐ principal

☐ parent notified: letter _____ telephone _____ M.D. _____ Person _____ ☐ dismissal

Referral

☐ Neighborhood Health Center ☐ Private Medical Doctor/Facility

☐ Out Patient Department ☐ Social Services

☐ Emergency Department ☐ Dental Services

☐ Mental Health ☐ Other

**EXHIBIT 5-2****Sample Initial Letter to Parents
Regarding Postural Screening**

Dear Parent or Guardian:

The _____ (name) _____ School will be doing an annual Postural Screening on _____ (date) _____. The Purpose of this is to find early signs of possible spinal problems in children in grades 5-9. It is not a diagnostic service but a program to identify young people who may need further evaluation.

If your child has any unusual findings, you will be notified and asked to take the child to a physician as a precaution. The majority of students exhibit no findings. If nothing unusual is found, we will not be contacting you again until the screening next year.

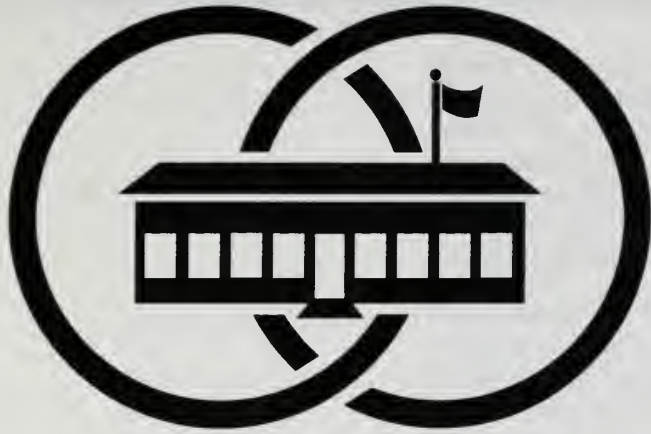
Female students are asked to bring a TWO-PIECE SWIMSUIT OR HALTER TOP AND SHORTS to school on the day of the screening. This type of clothing permits more accurate observation of the back.

If you have any questions, please contact me at _____ (phone) _____.

Sincerely yours,

School Physician or Nurse

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Chapter 6

NURSING PRACTICE IN THE SCHOOL SETTING

Standards of School Nursing Practice

The Nursing Process and Documentation

Education for School Nursing Practice and Certification of School Nurses

Networking with Colleagues in the Health Care Field

Delegation of Nursing Activities

Medication Administration



Abstract

Background: The purpose of this study was to investigate the effect of a 12-week training program on the physical and psychological health of police officers.

Methods: A total of 100 police officers participated in the study. They were divided into two groups: a control group and an intervention group. The intervention group received a 12-week training program consisting of physical and psychological exercises.

Results: The results of the study showed that the intervention group had significantly higher levels of physical fitness and psychological well-being compared to the control group.

Conclusions: The 12-week training program had a positive effect on the physical and psychological health of police officers.

Keywords: Police officers, physical fitness, psychological well-being, training program.

Introduction: Police officers are a high-risk population for physical and psychological health problems.

Physical fitness is an important factor in the health of police officers.

Psychological well-being is also an important factor in the health of police officers.



School nursing practice is one of the most rapidly evolving subspecialties of nursing. As increased attention has focused on the schools as a site where prevention, early intervention, and primary care can occur, the school nursing role has changed to incorporate increased responsibilities for managing the health service program and expanded clinical skills to serve students with a wide range of health risks, illnesses, and disabilities.

The purpose of school nursing is to enhance the educational process by the modification or removal of health-related barriers to learning and by promotion of an optimal level of wellness. School nurses practice under a public health model; they are responsible for assessing the health needs of a given population, the students in the school district or school building, and developing a program to meet those needs. To be effective, the school nurse must link the health service program with the health education and student support services found within the school and the community agencies serving children and adolescents. The nurse must also link the program with the school's social and physical environment.

M.G.L. c. 71, s. 53 requires each school committee to appoint one or more school physicians and registered nurses, assign them to public schools within its jurisdiction, and provide all proper facilities for the performance of their duties. The physicians and nurses must be registered in Massachusetts. (See Chapter 2 for position descriptions of school health personnel.) The numbers of school nurses and assignment to schools should be based on the results of a health needs assessment of the student population. The following registered nurse-to-pupil ratios represent generally accepted guidelines by national professional organizations, including the American Nurses Association (ANA): 1:750 in general school populations, 1:225 in main-streamed populations, and 1:125 in severely/profoundly disabled populations.

Like their hospital and community nursing colleagues, school nurses are registered nurses practicing under a license issued by the Massachusetts Board of Registration in Nursing. They are governed by M.G.L. Chapter 112, The Nurse Practice Act, and related regulations (244 CMR). Each nurse is responsible for her or his own practice. Standards of practice, conduct, confidentiality, delegation, and documentation, to name a few, apply in the school setting as they do in other health care arenas. Increasingly, nurse practitioners (licensed by the Board of Registration in Nursing) are practicing in school-based health centers as well as in general school health programs. Their practice in this expanded role is defined by the Board of Registration in Nursing.

STANDARDS OF SCHOOL NURSING PRACTICE

In 1993, the National Association of School Nurses described the following standards of school nursing practice, which expanded on the ANA standards issued a decade earlier:

Standard I Clinical Knowledge: The school nurse utilizes a distinct clinical knowledge base for decision-making in nursing practice.



Standard II Nursing Process: The school nurse uses a systematic approach to problem-solving in nursing practice.

Standard III Clients with Special Health Care Needs: The school nurse contributes to the education of the client with special health needs by assessing the client, planning and providing appropriate nursing care, and evaluating the identified outcomes of care.

Standard IV Communication: The school nurse uses effective written, verbal, and nonverbal communication skills.

Standard V Program Management: The school nurse establishes and maintains a comprehensive school health program.

Standard VI Collaboration within the School System: The school nurse collaborates with other school professionals, parents, and care givers to meet the health, developmental, and educational needs of clients.

Standard VII Collaboration with Community Health Systems: The school nurse collaborates with members of the community in the delivery of health and social services, and utilizes the knowledge of community health systems and resources to function as a school-community liaison.

Standard VIII Health Education: The school nurse assists students, families and the school community to achieve optimal levels of wellness through appropriately designed and delivered health education.

Standard IX Research: The school nurse contributes to nursing and school health through innovations in practice and participation in research or research-related activities.

Standard X Professional Development: The school nurse identifies, delineates and clarifies the nursing role, promotes quality of care, pursues continued professional enhancement, and demonstrates professional conduct.

See Exhibit 6-1 at the end of the chapter for the ANA Code for Nurses.

THE NURSING PROCESS AND DOCUMENTATION

Nursing process refers to a scientific protocol that the school nurse applies to the management of the school health program, as well as to individual client care and health room encounters. It has the following components:



- **Assessment.** The collection of information from a variety of sources (e.g., students, families, health care providers, school staff, and community organizations).
- **Diagnosis.** The analysis of the information from the assessment to determine the nursing diagnosis and facilitate the development of a plan of action.
- **Identification of outcomes.** The identification of measurable, appropriate, individualized, and attainable goals within certain time frames.
- **Plan.** The identification of action steps and interventions to promote, maintain, or restore health, prevent illness, and/or provide rehabilitation for the individual student or a given population.
- **Implementation.** The execution or activation of the plan of care in a safe and appropriate manner.
- **Evaluation.** The systematic and ongoing appraisal of the effectiveness of the interventions as they relate to the outcomes.

A critical element of nursing practice and nursing process is documentation. The school nurse must document each time she or he plans and delivers care to a student. The adage applies here: "If it is not documented, it was not done." Each student should have an individual health record. (See Chapter 2 for more information on student health records.) A currently acceptable documentation system is "SOAP", an organized method of problem solving:

S (Subjective Data): What does the student or family state, or, for communities, what information do the citizens share?

O (Objective Data): What information is observed or measured? What are the norms, standards?

A (Assessment): What, in the nurse's judgment, is happening? What are the concerns and/or resulting or potential impact on the student's or community's health?

P (Plan): What are the desired outcomes, and how will they be measured? What actions must be taken to achieve those outcomes? Who is responsible? What other disciplines or agencies are involved?

Documentation should also include an ongoing assessment of whether the outcomes have been achieved, whether the plan should be changed, and whether other actions or strategies should be implemented.



CHAPTER 6

EDUCATION FOR SCHOOL NURSING PRACTICE AND CERTIFICATION OF SCHOOL NURSES

The dynamic, comprehensive, and expanding nature of school nursing practice demands an appropriate educational and skill level that enables nurses to meet the contemporary health needs of students. Massachusetts colleges of nursing, like their counterparts in other states, are beginning to develop baccalaureate, masters, and school nurse practitioner programs responsive to the educational needs of nurses practicing in the school setting. All school nurses are encouraged to seize educational opportunities to expand their knowledge about the diverse and complex health issues of children, adolescents, and their families. They are also encouraged to increase their program management skills, thus enabling them to become effective managers of the school health service program.

The Education Reform Act of 1993 amends the teacher certification act to include school nurses. In the fall of 1993, the Department of Education, in collaboration with the Department of Public Health, the Massachusetts School Nurse Organization, and other organizations, drafted requirements for certification of school nurses, similar to the certification requirements for teachers and other support personnel. The regulations were approved by the Board of Education in September 1994. The Department of Education holds the final authority for implementation of the regulations.

NETWORKING WITH COLLEAGUES IN THE HEALTH CARE FIELD

Unlike their hospital colleagues and nurses employed by community nursing services, school nurses practice in a setting where the primary focus is education rather than health. The nurse in the school is frequently isolated from health colleagues and from readily available professional resources for consultation on health issues making the need to update skills and knowledge through continuing education and networking extremely important. Some recommended methods to accomplish this include the following:

- *Linkages with local health care providers.* Interpretation of the school health program in writing or verbally to local health providers is essential. School nurses should identify and introduce themselves to a range of health and human services providers within the communities being served by the school district.
- *Linkages with local schools of nursing.* School nurses should develop ties with nursing experts within local universities. Examples of linkages include agreements by the university to provide consultation, placement of students in the school setting as part of their public health practicum, and the school nurses providing guest lectures in nursing, medical, or other programs.
- *Collaboration in nursing research in school health.* The school nurse has a unique opportunity to design



or participate with university colleagues in the preparation of studies addressing the complex and diverse health needs of children and adolescents. Collaboration may also occur with health education colleagues who focus on teaching healthy life-styles to students. Application for grants is strongly encouraged.

- *Linkages and networking with other school nurses.* Developing opportunities to consult with colleagues in the school nursing specialty area is essential to maintaining skills and ensuring support in a very challenging role. In addition, the sharing of successful programs, policies, and procedures can promote the general improvement of school health programs throughout the Commonwealth. Networking may take the form of regular regional meetings, telephone consultation, continuing education, E-mail, and shared resources such as videos. Some school nurses from different schools may also participate in peer evaluation.

DELEGATION OF NURSING ACTIVITIES

The Massachusetts Board of Registration in Nursing is authorized to promulgate rules and regulations concerning nursing practice, provided they are consistent with the Nurse Practice Act. These rules and regulations have the same force and effect as law.

In 1991, the board promulgated regulations relative to delegation to and supervision of unlicensed personnel (244 CMR 3.05). The regulations resulted from the two-year work of a task force consisting of representatives of all major professional nursing organizations in the Commonwealth. They are intended to guide the nurse in the complex decision making often required in determining what nursing activities are appropriate to delegate, to whom, and for which patients or clients. In the school setting, these decisions are always the responsibility of the individual school nurse, who bears responsibility for the outcome of a delegated task.

Key Features of the Nurse Practice Act and Delegation Regulations

The Nurse Practice Act permits professional nurses to delegate nursing activities (M.G.L. c. 112, s. 80B: Definition of Professional Nursing: "Professional nursing shall mean teaching or supervising others"). The Board of Nursing regulations (244 CMR 3.00) give guidelines and outline responsibilities for the nurse making decisions about delegation.

244 CMR 3.02: *A registered nurse, within the parameters of his/her generic and continuing education and experience, may delegate nursing activities to other . . . health care personnel, provided that the delegating nurse shall bear full and ultimate responsibility for:*

1. *making an appropriate assignment;*
2. *properly and adequately teaching, directing and supervising the delegatee;*
3. *the outcomes of that delegation.*



Bearing full and ultimate responsibility for the outcome of a delegated activity means that the nurse is fully accountable for her or his decisions related to delegation: for deciding that a particular activity can be delegated; for making the decision that the person delegated to do an activity is competent to carry it out safely; for assessing that for the individual patient involved, an activity can safely be done by a particular unlicensed person; and for determining and providing the appropriate degree of nursing supervision needed.

The regulations further state that the activity to be delegated must be within the **nurse's scope of practice**, and the activity must be within the unlicensed person's **job description** and be in compliance with the employing agency's **policies and procedures**.

Decision-making Guidelines

School nurses can minimize health risk or liability related to any delegated activity by following some simple decision-making guidelines:

- Always make an assessment of the individual student's needs prior to delegating any activities. If a particular activity requires nursing assessment or judgment during implementation, that activity should not be delegated. It is possible for a nurse to determine that similar tasks or activities have different requirements for nursing assessment or judgment during implementation because of different patient needs, the training of the unlicensed person, or the nurse's own ability to be readily available during implementation of the activity.
- Delegate only to persons who have received the appropriate training to carry out a particular activity. A nurse's failure to determine a person's ability to complete a delegated task leaves the nurse susceptible to making an inappropriate delegation decision.
- Develop a plan to monitor unlicensed school staff to whom medication administration or other nursing activities are delegated, and have a plan for addressing problems when they are identified. The regulations at 105 CMR 210.005 (G) serve as a guide for the nurse's responsibilities in this area. Lack of or inadequate monitoring or supervision may result in a nurse's failure to identify problems. This, and failure to follow through on problems that are identified, may put the patient and nurse at risk.

Whether a particular activity is a nursing activity under the Board of Nursing's definition of nursing is addressed by M.G.L. c. 112, s. 80B:

"Professional nursing shall mean the performance for compensation of any of those services in observing and caring for ill, injured or infirm, in applying counsel and procedures to safeguard life and health, in administering treatment or medication prescribed by a physician,



dentist, nurse practitioner, certified nurse midwife, psychiatric nurse mental health clinical specialist, or by a physician assistant, or in teaching and supervising others, which are commonly performed by registered nurses and which require specialized knowledge and skill such as are taught and acquired under the established curriculum in a school for nurses.”

Among other considerations are these:

- Is there a valid licensed provider order (when indicated) and parent-guardian consent for the activity?
- Can it be done by unlicensed staff under registered nurse supervision?
- What is your own nursing assessment?
- What level of care is required based on the nature of the activity, the student's needs, the unlicensed person's abilities, and how will you be able to provide the necessary supervision?
- How much training will be required?
- Is the unlicensed person competent to do the activity safely? How and where is this competence documented?

When an unlicensed person has been delegated an activity, the following guidelines apply:

- Always provide a written plan of care.
- Determine how much supervision will be required.
- Determine when the situation will be reassessed or reevaluated.
- Specify when the unlicensed person must consult with you.
- Give specific instructions about what the unlicensed person should document.
- Document your decision making and what you do, including assessments, evaluation, and supervision of the unlicensed person.

Activities That May Not be Delegated

The Nursing Board regulations (244 CMR 3.05 (5)) are specific about the nursing activities that may not be delegated:

- Activities that require nursing assessment and judgment during implementation.
- Physical, psychological, and social assessment that requires nursing assessment, intervention, referral, or follow-up.



- Formulation of the plan of nursing care and evaluation of the patient or client's response to the care provided.
- Administration of medications, except as permitted by M.G.L. Chapter 94C.

School nurses (registered nurses) are the only category of nurse specialist authorized to delegate the administration of medications to unlicensed personnel under 94C. The delegation of medication administration under the Regulations Governing the Administration of Prescription Medications in Public and Private Schools (105 CMR 210.000) is consistent with the Board of Registration in Nursing delegation regulations.

MEDICATION ADMINISTRATION

Medication administration is an important issue in the schools. Children with chronic illnesses and conditions are attending schools regularly and may require medication administration during the school day. Complex questions have arisen about the administration of both prescription medications and over-the-counter medications.

The Massachusetts Department of Public Health regulates the administration of **prescription** medications and has promulgated detailed Regulations Governing the Administration of Prescription Medications in Public and Private Schools (105 CMR 210.000). The Massachusetts Board of Registration in Nursing governs nursing practice, which includes the nurse's administration of all medications, including over-the-counter medications. In response to many questions about the administration of over-the-counter medications in schools, the Board issued its Policy for Medication Administration in Massachusetts Schools According to Protocols Written by an Authorized Prescriber (Physician, Nurse Practitioner, Dentist) in June, 1992.

Administration of Prescription Medication

In July 1992, in response to concerns raised by both parents and professionals about medication administration in the Commonwealth's schools, the legislature enacted law requiring the department to draft regulations governing administration of prescription medications in the school settings under M.G.L. Chapter 94C, the Controlled Substances Act.

In March 1993, the Public Health Council passed regulations that were promulgated by the secretary of state governing prescription medication administration (105 CMR 210.000) in all Massachusetts public and private schools. (See Exhibits 6-2 through 6-8.)

The purpose of the regulations is to provide minimum standards for the safe and proper administration of prescription medications to students in the Commonwealth's public and private primary and secondary schools. The regulations seek to ensure that students requiring prescription medication during the school day will be able to attend school and to ensure that prescription medications are safely administered in schools. The legislation encourages collaboration between parents and guardians and the school in this



effort. The regulations provide school officials, parents, health professionals, and educational personnel with the guidance necessary to guarantee safe and proper administration of medications, consistent with the standards of nursing and medical practice.

Key Features of the Regulations

Under M.G.L. Chapter 94C, there are now two options for the administration of prescription medications in public and private schools:

1. Administration by certain licensed professionals such as nurses, physicians, and dentists.
2. The delegation model, which permits certain unlicensed personnel to administer prescription medications provided that:
 - (a) the school committee or board of trustees approves policy for administration by unlicensed school personnel,
 - (b) the school nurse (a registered professional nurse appointed under the provisions of M.G.L. c. 71, s. 53) manages the medication administration program,
 - (c) the school committee/board of trustees provides assurance that there are sufficient school nurses to provide safe supervision of unlicensed personnel,
 - (d) unlicensed personnel receive training under the direction of the school nurse and as specified by the department, and
 - (e) the school system is registered with the Department of Public Health to ensure compliance with the regulations.

The regulations are meant to help school districts do the following:

- Encourage school attendance of students requiring medication administration during the school day.
- Set uniform standards for safe and proper administration of medications in schools.
- Recognize and enhance the school nurse's professional role by designating her or him as the manager of the medication administration program.
- Set standards for self-administration of medication, thus improving access to medications for students with such conditions as asthma, who may require the use of an inhaler during the school day.

If a school district chooses the option of delegation to unlicensed personnel, there are two steps in the registration process:



1. *Initial request to the School Health Unit, Department of Public Health, for approval to delegate the administration of prescription medications in public and private schools:* In order to begin the application process, a school committee or board of trustees must submit the initial request application form to the regional school health advisor, who will conduct a desk review of the initial application and notify both the applicant and the Division of Food and Drugs of the School Health Unit's decision. (Application forms are available from the Regional School Health Advisor.)
2. *Application to the Division of Food and Drugs, Department of Public Health, for Registration under the Controlled Substances Act, M.G.L. Chapter 94C, to Delegate Administration of Prescription Medications in Public and Private Schools:* After notification of the School Health Unit's approval, the Division of Food and Drugs will proceed with the registration process. The process includes the school's completion of an application and payment of an annual \$50 registration fee. When the Division of Food and Drugs grants its approval, a formal written registration to delegate the administration of prescription medications to unlicensed personnel under 105 CMR 210.000 will be sent to the school by the Department of Public Health. The school may then proceed with its plan for delegation.

The staff of both the School Health Unit and the Division of Food and Drugs are authorized to make site visits when appropriate in order to review the planning and implementation process. To the extent possible, these will be made on a joint basis.

Delegation for Field Trips and Other Short-term Special School Events Only

For school districts that do not choose the delegation model except for the purposes of field trips, the Department of Public Health has developed an expedited registration. School districts wishing to apply for this option should send a request in writing to the regional school health adviser. Requests will be granted provided the school district agrees to comply with the Department of Public Health Regulations 210.005(E) (1) (o), which require

development of a plan for medication administration during field trips and special school events (unique one-time events which are not part of the regular school schedule and involve travel from the school site). Every effort shall be made to obtain a nurse or school staff member trained in medication administration to accompany students at special school events. When this is not possible, the school nurse may delegate prescription medication to another responsible adult. Written consent from the parent or guardian for the named responsible adult to administer the prescription medication



shall be obtained. The school nurse shall instruct the responsible adult on how to administer the prescription medications to the child.

This expedited registration for field trips covers the administration of epinephrine (e.g., epi-pens) or other emergency medication on the field trip.

The regional school health adviser can answer all questions dealing with medication administration and the registration process for delegation.

The School Nurse's Role

Regardless of which option is chosen (administration by licensed professionals or the delegation model), the school nurse's role in medication administration includes:

- Policy development.
- Collaboration with the school physician and school health advisory committee.
- Management of the medication administration program.

If delegation is approved, additional responsibilities include:

- Determining which unlicensed person may give the medication (within the categories permitted by the school committee).
- Training the identified person(s).
- Supervising the unlicensed person(s).
- Monitoring the program.

The School Committee or Board of Trustee's Role

The school committee or board of trustees is responsible for the following:

- Adoption of policies and procedures governing the administration of prescription medications and self-administration of prescription medications within the school system, following development of proposals by the school nurse in consultation with the school physician.
- Where the option of delegation is chosen, approval of categories of unlicensed personnel who may administer prescription medications. (e.g., administrative personnel, teachers, secretaries, and health aides.)

Administration of Over-the-Counter Medications

Over-the-counter (OTC) medications, like any other medications, are potentially hazardous to the health of students, based on the quantity given, potential side effects, interactions with other medications, and untoward reaction. Recent studies linking aspirin to Reye's syndrome in the young child have shown the potential danger, demonstrating that there are areas of drug reactions in children



for which we have little information. OTCs do have their place, but they should not be taken casually.

Furthermore, society is increasingly relying on OTC medications for conditions that, if investigated, might have a simple resolution of a problem (e.g., if the child does not eat and gets hypoglycemia, a headache may result). Mere dispensing of an OTC medication will not ameliorate the underlying cause.

Medication administration of OTC drugs by nurses is governed by the Board of Registration in Nursing of the Commonwealth of Massachusetts. (See Exhibit 6-9.)

SAMPLE POLICIES AND PROCEDURES

In order to facilitate the implementation of the regulations governing the administration of medication, sample policies, letters, and forms have been developed. Regarding the policies, school systems have three options:

1. Adopt the policies as written, placing them on school letterhead and making them specific to their school system.
2. Make the policies more stringent but not less stringent than the regulations (e.g., they may wish to accept only a written provider's medication order rather than using the pharmacy-labeled container for short-term medications of 10 days or less).
3. Rewrite all the policies and procedures or use their current ones, *provided they are updated to be consistent with the regulations.*

Sample policies and forms are provided in the chapter exhibits:

- American Nurses Association Code for Nurses (Exhibit 6-1).
- Sample policies and procedures for the administration of medications (Exhibit 6-2).
- Sample parent/guardian letter (Exhibit 6-3).
- Sample parent/guardian authorization (Exhibit 6-4).
- Sample medication order form (Exhibit 6-5).
- Sample medication administration plan (Exhibit 6-6).
- Sample medication administration log (Exhibit 6-7).
- Sample medication error report form (Exhibit 6-8).
- Board of Registration in Nursing policy for the administration of over-the-counter medications (Exhibit 6-9).



REFERENCES

American Nurses Association. (1983). *Standards of School Nursing Practice*. Kearneysville, WV: American Nurses' Publishing.

American Nurses Association. (1985). *Code for Nurses with Interpretative Statements*. Kearneysville, WV: American Nurses' Publishing.

American School Health Association. (1991). *Implementation Guide for the Standards of School Nursing Practice*. Kent, OH: ASHA.

National Association of School Nurses. (1990). *Code of Ethics With Interpretive Statements for the School Nurse*. Scarborough, ME: National Association of School Nurses, Inc.

Proctor, S. T. with Lordi, S.L. and Zaiger, D.S. (1993). *School Nursing Practice: Roles and Standards*. Scarborough, ME: National Association of School Nurses.

Wold, S. (1990). *School Nursing: A Framework for Practice*. North Branch, MN: Sunrise River Press.



CHAPTER 6

EXHIBIT 6-1

ANA Code for Nurses

1. The nurse provides services with respect for human dignity and the uniqueness of the client, unrestricted by considerations of social or economic status, personal attributes, or the nature of health problems.
2. The nurse safeguards the client's right to privacy by judiciously protecting information of a confidential nature.
3. The nurse acts to safeguard the client and the public when health care and safety are affected by the incompetent, unethical, or illegal practice of any person.
4. The nurse assumes responsibility and accountability for individual nursing judgments and actions.
5. The nurse maintains competence in nursing.
6. The nurse exercises informed judgment and uses individual competence and qualifications as criteria in seeking consultation, accepting responsibilities, and delegating nursing activities to others.
7. The nurse participates in activities that contribute to the ongoing development of the profession's body of knowledge.
8. The nurse participates in the profession's efforts to implement and improve standards of nursing.
9. The nurse participates in the profession's efforts to establish and maintain conditions of employment conducive to high quality nursing care.
10. The nurse participates in the profession's effort to protect the public from misinformation and misrepresentation and to maintain the integrity of nursing.
11. The nurse collaborates with members of the health professions and other citizens in promoting community and national efforts to meet the health needs of the public.

Source: American Nurses Association, *Code for Nurses with Interpretative Statements*. 1985



EXHIBIT 6-2

Sample Policies and Procedures for the Administration of Medications (based on 105 CMR 210.000)

The _____ School Committee/Board of Trustees, in consultation with the _____ Board of Health (where applicable) approves the following policies governing administration of medications in the schools under its jurisdiction.

I. Management of the Medication Administration Program

- A. The school nurse shall be the supervisor of the medication administration program in the school.
- B. The school nurse, the school physician, and the school health advisory committee, if established, shall develop and propose to the School Committee or Board of Trustees policies and procedures relating to the administration of medications.
- C. Medication Orders/Parental Consent:
 1. The school nurse shall ensure that there is a proper medication order from a licensed prescriber which is renewed as necessary, including the beginning of each academic year. A telephone order or an order for any change in medication shall be received only by the school nurse. Any such verbal order must be followed by a written order within three school days. Whenever possible, the medication order shall be obtained, and the medication administration plan shall be developed before the student enters or reenters school.
 - a. In accordance with standard medical practice, a medication order from a licensed prescriber shall contain:
 - (1) the student's name;
 - (2) the name and signature of the licensed prescriber and business and emergency phone numbers;
 - (3) the name of the medication;
 - (4) the route and dosage of medication;
 - (5) the frequency and time of medication administration;
 - (6) the date of the order and discontinuation date;
 - (7) a diagnosis and any other medical condition(s) requiring medication, if not a violation of confidentiality or if not contrary to the request of a parent, guardian or student to keep confidential;
 - (8) specific directions for administration.
 - b. Every effort shall be made to obtain from the licensed prescriber the following additional information, if appropriate:
 - (1) any special side effects, contraindications and adverse reactions to be observed;
 - (2) any other medications being taken by the student;
 - (3) the date of the next scheduled visit, if known.



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c. Special Medication Situations

- (1) For short-term medications, i.e., those requiring administration for ten school days or fewer, the pharmacy-labelled container may be used in lieu of a licensed prescriber's order; if the nurse has a question, she may request a licensed prescriber's order.
 - (2) For "over-the-counter" medications, i.e., nonprescription medications, the school nurse shall follow the Board of Registration in Nursing's protocols regarding administration of over the-counter medications in schools.
 - (3) Investigational new drugs may be administered in the schools with
 - (a) a written order by a licensed prescriber,
 - (b) written consent of the parent or guardian, and
 - (c) a pharmacy-labelled container for dispensing. If there is a question, the school nurse may seek consultation and/or approval from the school physician to administer the medication in the school setting.
2. The school nurse shall ensure that there is a written authorization by the parent or guardian which contains:
- a. the parent or guardian's printed name, signature and an emergency phone number;
 - b. a list of all medications the student is currently receiving, if not a violation of confidentiality or contrary to the request of the parent, guardian or student that such medications not be documented;
 - c. approval to have the school nurse or school personnel designated by the school nurse administer the medication;
 - d. persons to be notified in case of a medication emergency, in addition to the parent or guardian and licensed prescriber.

D. Medication Administration Plan:

1. The school nurse, in collaboration with the parent or guardian whenever possible, shall establish a medication administration plan for each student receiving a medication. Whenever possible, a student who understands the issues of medication administration shall be involved in the decision-making process and his/her preferences respected to the maximum extent possible.¹ If appropriate, the medication administration plan shall be referenced in any other health or educational plan developed pursuant to the Massachusetts Special Education Law (Individual Education Plan under Chapter 766) or federal laws, such as the Individuals with Disabilities Education Act (IDEA) or Section 504 of the Rehabilitation Act of 1973.
2. Prior to the initial administration of the medication, the school nurse shall assess the child's health status and develop a medication administration plan which includes:
 - a. the name of the student;
 - b. an order from a licensed prescriber, including business and emergency telephone numbers;
 - c. the signed authorization of the parent or guardian, including home and business telephone numbers;
 - d. any known allergies to food or medications;
 - e. the diagnosis, unless a violation of confidentiality or the parent, guardian or student requests that it not be documented;

1. The DOE guidelines for special education require student consent for the 18-21 age group and student participation in planning after age 14 if appropriate.



- f. the name of the medication;
 - g. the dosage of the medication, frequency of administration and route of administration;
 - h. any specific directions for administration;
 - i. any possible side effects, adverse reactions or contraindications;
 - j. the quantity of medication to be received by the school from the parent or guardian;
 - k. the required storage conditions;
 - l. the duration of the prescription;
 - m. the designation of unlicensed school personnel, if any, who will administer the medication to the student in the absence of the nurse, and plans for back-up if the designated persons are unavailable;
 - n. plans, if any, for teaching self administration of the medication;
 - o. with parental permission, other persons, including teachers, to be notified of medication administration and possible adverse effects of the medication;
 - p. a list of other medications being taken by the student, if not a violation of confidentiality or contrary to the request of the parent, guardian or student that such medication not be documented;
 - q. when appropriate, the location where the administration of the medication will take place;
 - r. a plan for monitoring the effects of the medication;
 - s. provision for medication administration in the case of field trips and other short-term special school events. Every effort shall be made to obtain a nurse or school staff member trained in medication administration to accompany students at special school events. When this is not possible, the school nurse may delegate medication administration to another responsible adult. Written consent from the parent or guardian for the named responsible adult to administer the medication shall be obtained. The school nurse shall instruct the responsible adult on how to administer the medication to the child.
- E. The school nurse shall develop a procedure to ensure the positive identification of the student who receives the medication.
- F. The school nurse shall communicate significant observations relating to medication effectiveness and adverse reactions or other harmful effects to the child's parent or guardian and/or licensed prescriber.
- G. In accordance with standard nursing practice, the school nurse may refuse to administer or allow to be administered any medication, which, based on her/his individual assessment and professional judgment, has the potential to be harmful, dangerous or inappropriate. In these cases, the parent/guardian and licensed prescriber shall be notified immediately by the school nurse and the reason for refusal explained.
- H. For the purposes of medication administration, the Licensed Practical Nurse functions under the general supervision of the school nurse who has delegating authority. (Medication administration is within the scope of practice for the Licensed Practical Nurse under M.G.L. Chapter 112.)
- I. The school nurse shall have a current pharmaceutical reference available for her/his use, such as the *Physician's Desk Reference* (PDR) or *U.S.P.D.I. (Dispensing Information), Facts and Comparisons*.
- J. Delegation/Supervision (This section applies to school districts or private schools which have been registered by the Massachusetts Department of Public Health to permit school nurses to delegate responsibility for administration of medication to trained nursing-supervised unlicensed school personnel.)



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The _____ School Committee/Board of Trustees, in consultation with the
_____ Board of Health, where applicable,

_____ authorizes

_____ does not authorize

that the responsibility for the administration of medication may be delegated to the following categories of unlicensed school personnel according to criteria delineated in CMR 210.004 (B)(2):

- _____ administrative staff
- _____ teaching staff
- _____ licensed health personnel
- _____ health aides
- _____ secretaries

For the purpose of administering emergency medication to an individual child, including parenteral administration (i.e., by injection) of medication pursuant to 210.004 (B) (4), the school nurse may identify individual school personnel or additional categories. Said school personnel shall be listed on the medication administration plan and receive training in the administration of emergency medication to a specific child.

1. The school nurse, in consultation with the school physician, shall have final decision-making authority with respect to delegating administration of medications to unlicensed personnel in school systems registered with the Department of Public Health.
2. When medication administration is delegated by the school nurse to unlicensed school personnel, such personnel shall be under the supervision of the school nurse for the purposes of medication administration.
3. A school nurse shall be on duty in the school system while medications are being administered by designated unlicensed school personnel, and available by telephone should consultation be required.
4. The administration of parenteral medications may not be delegated, with the exception of epinephrine or other medication to be administered in a life-threatening situation where the child has a known allergy or preexisting medical condition and there is an order for administration of the medication from a licensed prescriber and written consent of the parent or guardian.
5. Medications to be administered pursuant to p.r.n. ("as needed") orders may be administered by authorized school personnel after an assessment by or consultation with the school nurse for each dose.
6. For each school, an updated list of unlicensed school personnel who have been trained in the administration of medications shall be maintained. Upon request, a parent shall be provided with a list of school personnel authorized to administer medications.
7. Supervision of Unlicensed Personnel

Authorized unlicensed personnel administering medications shall be under the supervision of the school nurse. The School Committee or Board of Trustees, in consultation with the Board of Health where appropriate, shall provide assurance that sufficient school nurse(s) are available to provide proper supervision of unlicensed school personnel. Responsibilities for supervision at a minimum shall include the following:

- (a) After consultation with the principal or administrator responsible for a given school, the school nurse shall select, train and supervise the specific individuals, in those categories of school personnel approved by the School Committee or Board of Trustees, in consultation with the Board of Health when appropriate, who may administer medications. When necessary to protect student health and safety, the school nurse may rescind such selection.



- (b) The number of unlicensed school personnel to whom responsibility for medication administration may be delegated is determined by:
 - (1) the number of unlicensed school personnel the school nurse can adequately supervise on a weekly basis as determined by the school nurse;
 - (2) the number of unlicensed school personnel necessary, in the nurse's judgment, to ensure that the medications are properly administered to each student.
- (c) The school nurse shall supervise the training of the designees consistent with the Department of Public Health's requirements in CMR 210.007 of the Regulations Governing the Administration of Prescription Medications in Public and Private Schools.
 - (1) The school nurse shall document the training and evidence of competency of unlicensed personnel designated to assume the responsibility for medication administration.
 - (2) The school nurse shall provide a training review and informational update, at least annually, for those school staff authorized to administer medications.
- (d) The school nurse shall support and assist persons who have completed the training to prepare for and implement their responsibilities related to the administration of medication.
- (e) The first time that an unlicensed school personnel administers medication, the delegating nurse shall provide supervision at the work site.
- (f) The degree of supervision required for each student shall be determined by the school nurse after an evaluation of the appropriate factors involved in protecting the student's health including, but not limited to the following: (a) health condition and ability of the student; (b) the extent of training and capability of the unlicensed school personnel to whom the medication administration is delegated; (c) the type of medication; and (d) the proximity and availability of the school nurse to the unlicensed person who is performing the medication administration.
- (g) Personnel designated to administer medications shall be provided with the names and locations of school personnel who have documented certification in cardiopulmonary resuscitation. Schools should make every effort to have a minimum of two school staff members with documented certification in cardiopulmonary resuscitation present in each school building throughout the day.
- (h) For the individual child, the school nurse shall:
 - (1) determine whether or not it is medically safe and appropriate to delegate medication administration;
 - (2) administer the first dose of the medication, if (1) there is reason to believe there is a risk to the child as indicated by the health assessment, or (2) if the student has not previously received this medication in any setting;
 - (3) review the initial orders, possible side effects, adverse reactions and other pertinent information with the person to whom medication administration has been delegated;
 - (4) provide supervision and consultation as needed to ensure that the student is receiving the medication appropriately. Supervision and consultation may include record review, on-site observation and/or student assessment;
 - (5) review all documentation pertaining to medication administration every two weeks or more often as necessary.

II. Self Administration of Medications

"Self administration" means that the student is able to consume or apply medication in the manner directed by the licensed prescriber, without additional assistance or direction.

A student may be responsible for taking his/her own medication after the school nurse has determined that the following requirements are met:



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- A. the student, school nurse and parent/guardian, where appropriate, enter into an agreement which specifies the conditions under which medication may be self administered;
- B. the school nurse, as appropriate, develops a medication administration plan which contains only those elements necessary to ensure safe self administration of medication;
- C. the student's health status and abilities have been evaluated by the school nurse who then deems self administration safe and appropriate. As necessary, the school nurse shall observe initial self administration of the medication;
- D. the school nurse is reasonably assured that the student is able to identify the appropriate medication, knows the frequency and time of day for which the medication is ordered;
- E. there is written authorization from the student's parent or guardian that the student may self medicate, unless the student has consented to treatment under M.G.L. c. 112, s. 12F or other authority permitting the student to consent to medical treatment without parental permission;
- F. if requested by the school nurse, the licensed prescriber provides a written order for self administration;
- G. the student follows a procedure for documentation of self administration of medication;
- H. the school nurse establishes a policy for the safe storage of self-administered medication and, as necessary, consults with teachers, the student and parent/guardian, if appropriate, to determine a safe place for storing the medication for the individual student, while providing for accessibility if the student's health needs require it. This information shall be included in the medication administration plan. In the case of an inhaler or other preventive or emergency medication, whenever possible, a backup supply of the medication shall be kept in the health room or a second readily available location;
- I. the student's self administration is monitored based on his/her abilities and health status. Monitoring may include teaching the student the correct way of taking the medication, reminding the student to take the medication, visual observation to ensure compliance, recording that the medication was taken, and notifying the parent, guardian or licensed prescriber of any side effects, variation from the plan, or the student's refusal or failure to take the medication;
- J. with parental/guardian and student permission, as appropriate, the school nurse may inform appropriate teachers and administrators that the student is self administering a medication.

III. Handling, Storage and Disposal of Medications

- A. A parent, guardian or parent/guardian-designated responsible adult shall deliver all medications to be administered by school personnel or to be taken by self medicating students, if required by the self administration agreement, to the school nurse or other responsible person designated by the school nurse.
 - 1. The medication must be in a pharmacy or manufacturer labelled container.
 - 2. The school nurse or other responsible person receiving the medication shall document the quantity of the medication delivered.
 - 3. In extenuating circumstances, as determined by the school nurse, the medication may be delivered by other persons; provided, however, that the nurse is notified in advance by the parent or guardian of the arrangement and the quantity of medication being delivered to the school.
- B. All medications shall be stored in their original pharmacy or manufacturer labelled containers and in such manner as to render them safe and effective. Expiration dates shall be checked.
- C. All medications to be administered by school personnel shall be kept in a securely locked cabinet used exclusively for medications, which is kept locked except when opened to obtain medications. The cabinet shall be substantially constructed and anchored securely to a solid surface. Medications requiring refrigeration shall be stored in either a locked box in a refrigerator or in a locked refrigerator maintained at temperatures of 38 to 42 degrees Fahrenheit.



- D. Access to stored medications shall be limited to persons authorized to administer medications and to self-medicating student. Access to keys and knowledge of the location of keys shall be restricted to the maximum extent possible. Students who are self-medicating shall not have access to other students' medications.
- E. Parents or guardians may retrieve the medications from the school at any time.
- F. No more than a thirty (30) school day supply of the medication for a student shall be stored at the school.
- G. Where possible, all unused, discontinued or outdated medications shall be returned to the parent or guardian and the return appropriately documented. In extenuating circumstances, with parental consent when possible, such medications may be destroyed by the school nurse in accordance with any applicable policies of the Massachusetts Department of Public Health, Division of Food and Drugs. All medications should be returned at the end of the school year.

IV. Documentation and Record-Keeping

- A. Each school where medications are administered by school personnel shall maintain a medication administration record for each student who receives medication during school hours.
 - 1. Such record at a minimum shall include a daily log and a medication administration plan, including the medication order and parent/guardian authorization.
 - 2. The medication administration plan shall include the information as described in Section 210.005 (E) of the Regulations Governing the Administration of Prescription Medications in Public and Private Schools.
 - 3. The daily log shall contain:
 - a. the dose or amount of medication administered;
 - b. the date and time of administration or omission of administration, including the reason for omission;
 - c. the full signature of the nurse or designated unlicensed school personnel administering the medication. If the medication is given more than once by the same person, he/she may initial the record, subsequent to signing a full signature.
 - 4. The school nurse shall document in the medication administration record significant observations of the medication's effectiveness, as appropriate, and any adverse reactions or other harmful effects, as well as any action taken.
 - 5. All documentation shall be recorded in ink and shall not be altered.
 - 6. With the consent of the parent, guardian, or student where appropriate, the completed medication administration record and records pertinent to self administration shall be filed in the student's cumulative health record. When the parent, guardian or student, where appropriate, objects, these records shall be regarded as confidential medical notes and shall be kept confidential.
- B. The school district shall comply with the Department of Public Health's reporting requirements for medication administration in the schools.
- C. The Department of Public Health may inspect any individual student medication record or record relating to the administration or storage of medications without prior notice to ensure compliance with the Regulations Governing the Administration of Prescription Medications in Public and Private Schools.

V. Reporting and Documentation of Medication Errors

- A. A medication error includes any failure to administer medication as prescribed for a particular student, including failure to administer the medication:



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1. within appropriate time frames (the appropriate time frame should be addressed in the medication administration plan);
 2. in the correct dosage;
 3. in accordance with accepted practice;
 4. to the correct student.
- B. In the event of a medication error, the school nurse shall notify the parent or guardian immediately. (The school nurse shall document the effort to reach the parent or guardian.) If there is a question of potential harm to the student, the nurse shall also notify the student's licensed prescriber or school physician.
- C. Medication errors shall be documented by the school nurse on the accident/incident report form. These reports shall be retained in the following location: _____ and/or the student health record. They shall be made available to the Department of Public Health upon request. All medication errors resulting in serious illness requiring medical care shall be reported to the Department of Public Health, Bureau of Family and Community Health. All suspected diversion or tampering of drugs shall be reported to the Department of Public Health, Division of Food and Drugs.
- D. The school nurse shall review reports of medication errors and take necessary steps to ensure appropriate medication administration in the future.

VI. Response to Medication Emergencies

(Insert the school's policy for handling all health emergencies in the school.) Such emergency policies shall contain (1) local emergency response system telephone numbers (including ambulance, poison control number, local emergency care providers, etc.), (2) persons to be notified, e.g., parent/guardian, licensed prescriber, etc., (3) names of persons in the school trained to provide first aid and cardio-pulmonary resuscitation, (4) scheduled programs for staff to be trained in first aid and CPR, (5) provision of necessary supplies and equipment and (6) reporting requirements.

The school nurse shall develop procedures for responding to medication emergencies, i.e., any reaction or condition related to administration of medication which poses an immediate threat to the health or well-being of the student. These procedures shall be consistent with the school's policy for handling all health emergencies and shall include maintaining a list of persons to be notified in case of a medication emergency.

VII. Dissemination of Information to Parents or Guardians Regarding Administration of Medication

Such information shall include an outline of these medication policies and shall be available to parents and guardians upon request.

VIII. Procedures for Resolving Questions between the School and Parents or Guardians Regarding Administration of Medications

(Insert the approved existing policies within the school district for the resolution of differences, if appropriate.)

NURSING PRACTICE IN THE SCHOOL SETTING



IX. Policy Review and Revision

Review and revision of these policies and procedures shall occur as needed but at least every two years.

Approved by School Physician: _____ Date _____
Signature

Approved by School Nurse: _____ Date _____
Signature

Date Approved by the School Committee/Board of Trustees _____

Authorizing Signature: _____

Date Registered by the Massachusetts Department of Public Health for Approval to Delegate to
Unlicensed Personnel, if applicable, _____



CHAPTER 6

EXHIBIT 6-3

Sample Parent/Guardian Letter

Dear Parent/Guardian:

We would like to inform you of the policies that have been put in place to ensure the health and safety of children needing medicines during the school day.

Our school district requires that the following forms must be on file in your child's health record before we begin to give any medicine at school:

1. Signed consent by the parent or guardian to give the medicine. Please complete the enclosed consent form and give it to your school nurse.
2. Signed medication order. The written medication order form should be taken to your child's licensed prescriber (your child's physician, nurse practitioner, etc.) for completion and returned to the school nurse. This order must be renewed as needed and at the beginning of each academic year.

Medicines should be delivered to the school in a pharmacy or manufacturer-labeled container by you or a responsible adult whom you designate. Please ask your pharmacy to provide separate bottles for school and home. No more than a thirty-day supply of the medicine should be delivered to the school.

When your child needs a medicine to be given during the school day, please act quickly to follow these policies so we may begin to give the medicine as soon as possible. Thank you for your help.

Sincerely yours,

School Nurse

Telephone

Attachments: Written Parent/Guardian Consent
Medication Order



EXHIBIT 6-4

Sample Parent/Guardian Authorization For Prescription Medication Administration

Student's name _____ Date of Birth _____

Parent/Guardian printed name _____

Telephone number — Home: _____

Telephone number — Work: _____

Telephone number — Emergency: _____

Other person(s) to be notified in case of medication emergency:

Name: _____ Telephone number: _____

My son/daughter is currently receiving the following medications (to be completed if not in violation of confidentiality):

My son/daughter has the following food or drug allergies:

I consent to have the school nurse or school personnel designated by the School Nurse administer the medication prescribed by:

_____ to _____
Licensed Prescriber Student's Name

I give permission for my son/daughter to self-administer medication, if the school nurse determines it is safe and appropriate.

____ Yes ____ No

I give permission to the School Nurse to share information relevant to the prescribed medication administration as he/she determines appropriate for my son's/daughter's health and safety.

I understand I may retrieve the medication from the school at any time; *however, the medication will be destroyed if it is not picked up within one week following termination of the order or one week beyond the close of school.*

Parent/guardian signature _____ Date: _____

Relationship to Student _____

Address: _____



CHAPTER 6

EXHIBIT 6-5

Sample Medication Order Form to be completed by a licensed prescriber

Name of Student _____ Date of Birth _____

Address _____ Grade _____
(street) (city/town)

Name of Licensed Prescriber _____ Title _____

Business Telephone Number _____

Emergency Telephone Number _____

Medication _____

Route of administration _____ Dosage _____

Frequency _____ Time(s) of Administration _____

(Please note: *Whenever possible, medication should be scheduled at times other than school hours*)

Specific directions or information for administration: _____

Date of Order _____ Discontinuation Date _____

Diagnosis* _____

Any other medical condition(s)* _____

Optional Information

1. Special side effects, contraindications, or possible adverse reactions to be

observed: _____

2. Other medication being taken by the student: _____

3. The date of the next scheduled visit or when advised to return to prescriber: _____

4. Consent for self administration (provided the school nurse determines it is safe and appropriate).

Yes _____ No _____

Signature of Licensed Prescriber

Date: _____

* if not in violation of confidentiality.



EXHIBIT 6-6

Sample Medication Administration Plan

Name of student _____ Date of Birth _____ Parent/guardian name _____

School _____ Grade _____ Home telephone _____

Name of licensed prescriber _____ Business telephone _____

Business telephone _____ Emergency telephone _____

Emergency telephone _____

Food/drug Allergies _____ Diagnoses: _____

(if not a violation of confidentiality)

Name of Medication: _____ Date Ordered _____ Duration of Order _____

Dosage _____ Frequency _____ Route of Administration _____ Expiration Date of Medications Received _____

Specific Directions, e.g., times to be given: _____

Possible Side Effects, Adverse Reactions: _____

Quantity of Medication Received by School and Date: _____

Required Storage Conditions: _____

Delegated to (if applicable): _____ Back-up Plans (if delegatee unavailable): _____

Plan for Field Trips: _____

Plans for teaching self administration, if applicable: _____

Other persons to be notified of medication administration (with parental permission): _____

Other medications being taken by the student (if not in violation of confidentiality): _____

Location where medication administration will occur: Health Room _____ Other (specify) _____

Plan for monitoring medication, if needed: _____

School Nurse Signature _____ Date _____

Parent/Guardian Signature _____ Date _____

Student's Signature, if appropriate _____ Date _____

(Medication order and parent/guardian authorization may be attached to this form.)

Section 1		Section 2		Section 3	
Item 1		Item 2		Item 3	
Item 4		Item 5		Item 6	
Item 7		Item 8		Item 9	
Item 10		Item 11		Item 12	
Item 13		Item 14		Item 15	
Item 16		Item 17		Item 18	
Item 19		Item 20		Item 21	
Item 22		Item 23		Item 24	
Item 25		Item 26		Item 27	
Item 28		Item 29		Item 30	
Item 31		Item 32		Item 33	
Item 34		Item 35		Item 36	
Item 37		Item 38		Item 39	
Item 40		Item 41		Item 42	
Item 43		Item 44		Item 45	
Item 46		Item 47		Item 48	
Item 49		Item 50		Item 51	
Item 52		Item 53		Item 54	
Item 55		Item 56		Item 57	
Item 58		Item 59		Item 60	
Item 61		Item 62		Item 63	
Item 64		Item 65		Item 66	
Item 67		Item 68		Item 69	
Item 70		Item 71		Item 72	
Item 73		Item 74		Item 75	
Item 76		Item 77		Item 78	
Item 79		Item 80		Item 81	
Item 82		Item 83		Item 84	
Item 85		Item 86		Item 87	
Item 88		Item 89		Item 90	
Item 91		Item 92		Item 93	
Item 94		Item 95		Item 96	
Item 97		Item 98		Item 99	
Item 100		Item 101		Item 102	
Item 103		Item 104		Item 105	
Item 106		Item 107		Item 108	
Item 109		Item 110		Item 111	
Item 112		Item 113		Item 114	
Item 115		Item 116		Item 117	
Item 118		Item 119		Item 120	
Item 121		Item 122		Item 123	
Item 124		Item 125		Item 126	
Item 127		Item 128		Item 129	
Item 130		Item 131		Item 132	
Item 133		Item 134		Item 135	
Item 136		Item 137		Item 138	
Item 139		Item 140		Item 141	
Item 142		Item 143		Item 144	
Item 145		Item 146		Item 147	
Item 148		Item 149		Item 150	
Item 151		Item 152		Item 153	
Item 154		Item 155		Item 156	
Item 157		Item 158		Item 159	
Item 160		Item 161		Item 162	
Item 163		Item 164		Item 165	
Item 166		Item 167		Item 168	
Item 169		Item 170		Item 171	
Item 172		Item 173		Item 174	
Item 175		Item 176		Item 177	
Item 178		Item 179		Item 180	
Item 181		Item 182		Item 183	
Item 184		Item 185		Item 186	
Item 187		Item 188		Item 189	
Item 190		Item 191		Item 192	
Item 193		Item 194		Item 195	
Item 196		Item 197		Item 198	
Item 199		Item 200		Item 201	
Item 202		Item 203		Item 204	
Item 205		Item 206		Item 207	
Item 208		Item 209		Item 210	
Item 211		Item 212		Item 213	
Item 214		Item 215		Item 216	
Item 217		Item 218		Item 219	
Item 220		Item 221		Item 222	
Item 223		Item 224		Item 225	
Item 226		Item 227		Item 228	
Item 229		Item 230		Item 231	
Item 232		Item 233		Item 234	
Item 235		Item 236		Item 237	
Item 238		Item 239		Item 240	
Item 241		Item 242		Item 243	
Item 244		Item 245		Item 246	
Item 247		Item 248		Item 249	
Item 250		Item 251		Item 252	
Item 253		Item 254		Item 255	
Item 256		Item 257		Item 258	
Item 259		Item 260		Item 261	
Item 262		Item 263		Item 264	
Item 265		Item 266		Item 267	
Item 268		Item 269		Item 270	
Item 271		Item 272		Item 273	
Item 274		Item 275		Item 276	
Item 277		Item 278		Item 279	
Item 280		Item 281		Item 282	
Item 283		Item 284		Item 285	
Item 286		Item 287		Item 288	
Item 289		Item 290		Item 291	
Item 292		Item 293		Item 294	
Item 295		Item 296		Item 297	
Item 298		Item 299		Item 300	
Item 301		Item 302		Item 303	
Item 304		Item 305		Item 306	
Item 307		Item 308		Item 309	
Item 310		Item 311		Item 312	
Item 313		Item 314		Item 315	
Item 316		Item 317		Item 318	
Item 319		Item 320		Item 321	
Item 322		Item 323		Item 324	
Item 325		Item 326		Item 327	
Item 328		Item 329		Item 330	
Item 331		Item 332		Item 333	
Item 334		Item 335		Item 336	
Item 337		Item 338		Item 339	
Item 340		Item 341		Item 342	
Item 343		Item 344		Item 345	
Item 346		Item 347		Item 348	
Item 349		Item 350		Item 351	
Item 352		Item 353		Item 354	
Item 355		Item 356		Item 357	
Item 358		Item 359		Item 360	
Item 361		Item 362		Item 363	
Item 364		Item 365		Item 366	
Item 367		Item 368		Item 369	
Item 370		Item 371		Item 372	
Item 373		Item 374		Item 375	
Item 376		Item 377		Item 378	
Item 379		Item 380		Item 381	
Item 382		Item 383		Item 384	
Item 385		Item 386		Item 387	
Item 388		Item 389		Item 390	
Item 391		Item 392		Item 393	
Item 394		Item 395		Item 396	
Item 397		Item 398		Item 399	
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Item 409		Item 410		Item 411	
Item 412		Item 413		Item 414	
Item 415		Item 416		Item 417	
Item 418		Item 419		Item 420	
Item 421		Item 422		Item 423	
Item 424		Item 425		Item 426	
Item 427		Item 428		Item 429	
Item 430		Item 431		Item 432	
Item 433		Item 434		Item 435	
Item 436		Item 437		Item 438	
Item 439		Item 440		Item 441	
Item 442		Item 443		Item 444	
Item 445		Item 446		Item 447	
Item 448		Item 449		Item 450	
Item 451		Item 452		Item 453	
Item 454		Item 455		Item 456	
Item 457		Item 458		Item 459	
Item 460		Item 461		Item 462	
Item 463		Item 464		Item 465	
Item 466		Item 467		Item 468	
Item 469		Item 470		Item 471	
Item 472		Item 473		Item 474	
Item 475		Item 476		Item 477	
Item 478		Item 479		Item 480	
Item 481		Item 482		Item 483	
Item 484		Item 485		Item 486	
Item 487		Item 488		Item 489	
Item 490		Item 491		Item 492	
Item 493		Item 494		Item 495	
Item 496		Item 497		Item 498	
Item 499		Item 500		Item 501	
Item 502		Item 503		Item 504	
Item 505		Item 506		Item 507	
Item 508		Item 509		Item 510	
Item 511		Item 512		Item 513	
Item 514		Item 515		Item 516	
Item 517		Item 518		Item 519	
Item 520		Item 521		Item 522	
Item 523		Item 524		Item 525	
Item 526		Item 527		Item 528	
Item 529		Item 530		Item 531	
Item 532		Item 533		Item 534	
Item 535		Item 536		Item 537	
Item 538		Item 539		Item 540	
Item 541		Item 542		Item 543	
Item 544		Item 545		Item 546	
Item 547		Item 548		Item 549	
Item 550		Item 551		Item 552	
Item 553		Item 554		Item 555	
Item 556		Item 557		Item 558	
Item 559		Item 560		Item 561	
Item 562		Item 563		Item 564	
Item 565		Item 566		Item 567	
Item 568		Item 569		Item 570	
Item 571		Item 572		Item 573	
Item 574		Item 575		Item 576	
Item 577		Item 578		Item 579	
Item 580		Item 581		Item 582	
Item 583		Item 584		Item 585	
Item 586		Item 587		Item 588	
Item 589		Item 590		Item 591	
Item 592		Item 593		Item 594	
Item 595		Item 596		Item 597	
Item 598		Item 599		Item 600	
Item 601		Item 602		Item 603	
Item 604		Item 605		Item 606	
Item 607		Item 608		Item 609	
Item 610		Item 611		Item 612	
Item 613		Item 614		Item 615	
Item 616		Item 617		Item 618	
Item 619		Item 620		Item 621	
Item 622		Item 623		Item 624	
Item 625		Item 626		Item 627	
Item 628		Item 629		Item 630	
Item 631		Item 632		Item 633	
Item 634		Item 635		Item 636	
Item 637		Item 638		Item 639	
Item 640		Item 641		Item 642	
Item 643		Item 644		Item 645	
Item 646		Item 647		Item 648	
Item 649		Item 650		Item 651	
Item 652		Item 653		Item 654	
Item 655		Item 656		Item 657	
Item 658		Item 659		Item 660	
Item 661		Item 662		Item 663	
Item 664		Item 665		Item 666	
Item 667		Item 668		Item 669	
Item 670		Item 671		Item 672	
Item 673		Item 674		Item 675	
Item 676		Item 677		Item 678	
Item 679		Item 680		Item 681	
Item 682		Item 683		Item 684	
Item 685		Item 686		Item 687	
Item 688		Item 689		Item 690	
Item 691		Item 692		Item 693	
Item 694		Item 695		Item 696	
Item 697		Item 698		Item 699	
Item 700		Item 701		Item 702	
Item 703		Item 704		Item 705	
Item 706		Item 707		Item 708	
Item 709		Item 710		Item 711	
Item 712		Item 713		Item 714	
Item 715		Item 716		Item 717	
Item 718		Item 719		Item 720	
Item 721		Item 722		Item 723	
Item 724		Item 725		Item 726	
Item 727		Item 728		Item 729	
Item 730		Item 731		Item 732	
Item 733		Item 734		Item 735	
Item 736		Item 737		Item 738	
Item 739		Item 740		Item 741	
Item 742		Item 743		Item 744	
Item 745		Item 746		Item 747	
Item 748		Item 749		Item 750	
Item 751		Item 752		Item 753	
Item 754		Item 755		Item 756	
Item 757		Item 758		Item 759	
Item 760		Item 761		Item 762	
Item 763		Item 764		Item 765	
Item 766		Item 767		Item 768	
Item 769		Item 770		Item 771	
Item 772		Item 773		Item 774	
Item 775		Item 776		Item 777	
Item 778		Item 779		Item 780	
Item 781		Item 782		Item 783	
Item 784		Item 785		Item 786	
Item 787		Item 788		Item 789	
Item 790		Item 791		Item 792	
Item 793		Item 794		Item 795	
Item 796		Item 797		Item 798	
Item 799		Item 800		Item 801	
Item 802		Item 803		Item 804	
Item 805		Item 806		Item 807	
Item 808		Item 809		Item 810	
Item 811		Item 812		Item 813	
Item 814		Item 815		Item 816	
Item 817		Item 818		Item 819	
Item 820		Item 821		Item 822	
Item 823		Item 824		Item 825	
Item 826		Item 827		Item 828	
Item 829		Item 830		Item 831	
Item 832		Item 833		Item 834	
Item 835		Item 836		Item 837	
Item 838		Item 839		Item 840	
Item 841		Item 842		Item 843	
Item 844		Item 845		Item 846	
Item 847		Item 848		Item 849	
Item 850		Item 851		Item 852	
Item 853		Item 854		Item 855	
Item 856		Item 857		Item 858	
Item 859		Item 860		Item 861	
Item 862		Item 863		Item 864	
Item 865		Item 866		Item 867	
Item 868		Item 869</			



EXHIBIT 6-7 (FRONT)

Sample Medication Administration Daily Log

(To be completed for each medication)

School Year _____

Name of Student _____ Date of Birth _____ Sex _____ Grade/Home Room (or Teacher) _____

Name of School _____

Name and Dosage of Medication _____ Route _____ Frequency _____ Time(s) Given in School _____

Directions: Initial with time of administration; a complete signature and initials of each person administering medications should be included below.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Sept																															
Oct																															
Nov																															
Dec																															
Jan																															
Feb																															
Mar																															
Apr																															
May																															
June																															

INITIAL

(of person administering medication)

SIGNATURE

INITIAL

SIGNATURE

CODES

1. _____ (A) Absent _____ (O) No Show _____
2. _____ (E) Early Dismissal (W) Dosage Withheld _____
3. _____ (F) Field Trip _____ (X) No School (i.e., holiday, weekend, snow day, etc.) _____
4. _____ (N) No Medication Available _____

Use reverse side for reporting significant information (e.g., observations of medication's effectiveness, adverse reactions, reason for omission, plan to prevent future "no shows").



CHAPTER 6

[illegible]



EXHIBIT 6-8

Sample Medication Error Report

A medication error is defined as: "failure to administer the prescribed medication within the appropriate time frame, in the correct dosage, in accordance with accepted practice, to the correct student."

Date of report _____ School _____ Prepared by _____

Name of student _____ Date of birth _____ Sex _____ Grade _____

Home address _____
(street)

(city/town) (zip code)

Date error occurred _____ Time noted _____

Person administering medication _____
(Name) (Title)

Licensed prescriber _____
(Name) (Address)

Reason medication was prescribed _____

Date of order _____ Instructions for administration _____

Medication _____ Dose _____ Route _____ Scheduled Time _____

Describe the error and how it occurred (use reverse side if necessary)

Action Taken

Licensed prescriber notified: Yes _____ No _____ Date _____ Time _____

Parent/guardian notified: Yes _____ No _____ Date _____ Time _____

Other persons notified: _____

Outcome:

Name _____
Type or Print Signature Title Date



CHAPTER 6

EXHIBIT 6-9

Board of Registration in Nursing Policy for the Administration of Over-the-Counter Medications



The Commonwealth of Massachusetts *Division of Registration*

Leverett Saltonstall Building, Government Center
100 Cambridge Street, Boston 02202

BOARD OF REGISTRATION IN NURSING

Policy

Medication Administration in Massachusetts Schools
According to Protocols Written by an Authorized Prescriber
(Physician, Nurse Practitioner, Dentist)

Nurses may administer over-the-counter medications to students in Massachusetts schools based on protocols which have been developed in collaboration with the school department's physician, dentist or nurse practitioner, provided that the appropriate school administrative authority allows the use of such protocols.

Protocols must include:

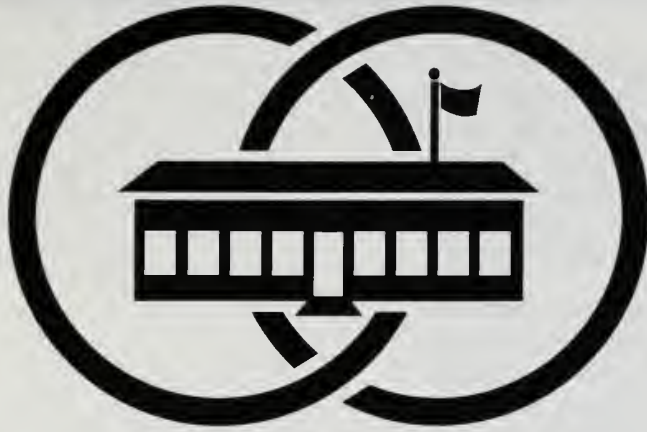
- Drug Name
- Dose
- Dosage Interval
- Indications and Contraindications
- Potential Adverse Effects
- Assessment factors the nurse must employ prior to administering the drug

Current medications which the student is taking, and the student's history of allergies must be part of the assessment.

Parental consent for use of a drug according to the protocol must be on file and available to the nurse, as must information about the student's known allergies.

Documentation of over-the-counter medication administered according to such protocols must conform to the school department's regulations for documentation of medication administered to students.

June 3, 1992
blpolicy



Chapter 7

CHILDREN WITH SPECIAL HEALTH CARE NEEDS

Prevalence of Chronic Illnesses and Disabilities

Factors Influencing Increased School Participation

The School's Role

The Individualized Health Care Plan

Selected Chronic Conditions



Chapter 1

The first chapter of the book is devoted to the study of the history of the church.

The second chapter of the book is devoted to the study of the history of the church.

The third chapter of the book is devoted to the study of the history of the church.

The fourth chapter of the book is devoted to the study of the history of the church.

The fifth chapter of the book is devoted to the study of the history of the church.

The sixth chapter of the book is devoted to the study of the history of the church.



The term *children with special health care needs* refers to children and adolescents who have a chronic illness or disability. These children are a heterogeneous population with a broad range of disabilities and chronic illnesses, including asthma, arthritic diseases, juvenile-onset diabetes, muscular dystrophy, cystic fibrosis, spina bifida, sickle cell anemia, AIDS, congenital heart disease, chronic kidney disease, hemophilia, leukemia, and cleft palate.

Children with special health care needs may need adaptations for daily functioning, prolonged or periodic hospitalizations, and/or special services in the educational setting; all need school health services, such as administration of medications, emergency plans, and coordination among teachers and community providers.

This chapter provides guidance for safe inclusion of children with special health care needs in school settings. The chapter emphasizes steps required for the care of the individual child or adolescent with special health care needs, including those children making the transition from early intervention services. It concludes with a brief description of selected chronic illnesses experienced by students in school settings. This chapter will continue to expand as students with a wide range of chronic conditions enter the schools.

PREVALENCE OF CHRONIC ILLNESSES AND DISABILITIES

Children with special health care needs represent about 10 to 15 percent of the population of children and youth from birth to 20 years of age; the estimates for Massachusetts are 135,000 to 270,000 children. A national survey found approximately 7% of children under 18 years of age to be limited in activity as a result of a health condition, or in fair or poor health, yielding a Massachusetts estimate of just under 95,000 children.

Over the past few decades there has been an increased survival of children with severe chronic illnesses, as well as a marked decline in mortality and morbidity from infectious diseases. Of the total group of children with special health care needs, about 10 percent (1 to 2 percent of the total population) are considered to have a severe chronic illness, defined as one that interferes significantly with normal functioning and development.

A 1991 study by Palfrey and her colleagues suggests that in Massachusetts approximately 1 child per 1000 — a total of approximately 1400 children between the ages of 3 months and 18 years — is dependent on life-support technology, such as tracheostomies and respirators.

Although children with HIV infection and children dependent on medical supports have received considerable attention in the public arena recently, their numbers are small, representing less than a fraction of 1 percent of the population.

These figures suggest that most schools are likely to encounter children and adolescents with special health care needs, as well as some who are technology dependent or have other complex needs. School policies and programs for these children are critically



important to their healthy growth and development. Services once rare and/or thought to be clearly outside the responsibility of schools, are legally mandated by state and federal statutes for all children who need them. These include providing catheterization, managing complex medical regimens, administering medications, and providing physical, occupational, speech, and language therapy, in order to meet an individual child's physical and health-related needs.

FACTORS INFLUENCING INCREASED SCHOOL PARTICIPATION

During the past twenty years, the number of children and adolescents with special health care needs in Massachusetts schools has grown, largely the result of three factors: improved medical technology, enhanced social attitudes promoting inclusion, and legislation requiring education in the least restrictive environment.

These three factors are strongly interrelated: the movement for social inclusion and autonomy for individuals with special health care needs is supported by medical practice and the existence of assistive technology; technology is influenced by changing social attitudes; and attitudes find their expression in advocacy and law, resulting in a greater presence of children with special health care needs in Massachusetts schools.

Improved Medical Practice and Technology

Changes in the standards and delivery of medical care are enhancing the survival of children and adolescents with a variety of conditions and diseases previously associated with short life expectancy, for instance, cystic fibrosis, childhood leukemia, diabetes, juvenile rheumatoid arthritis, and kidney disease.

When pediatric HIV (perinatally acquired) was first identified in the early 1980s, the prevailing view was that infected children were born sick and were destined to lead short and debilitated lives. Now life expectancy is increasing in this population, enhanced by improved medical care and the early identification and treatment of children.

New technologies support basic life functions, and may include devices for mechanical ventilation, tracheostomy, gastrostomy, equipment for delivery of intravenous medications, and kidney dialysis. New devices are relatively portable, making home care and mobility possible for children who once would have been hospital- or institution-bound. Training is required for both the use of this equipment and the underlying medical condition.

Improved Social Attitudes Toward Disability

Over the past twenty years American society has experienced a major shift in attitudes toward disability. In part, this shift reflects the availability of new technology and new medical procedures. The disability awareness movement has also fostered new ways of thinking about disabilities and about individuals affected by them. Throughout society, there is growing recognition that disability does not preclude productivity or autonomy. Everyone has abilities upon which to build and there are many ways to compensate for specific disabilities.



Stereotypic notions of children and adults with disabilities have not disappeared, but advocates at community, state, and national levels are not permitting these notions to be accepted without challenge. Changes in attitude have already had an impact on the degree to which children and adolescents with special health care needs are included in different aspects of community life, including the school.

Reflecting this shift in attitudes, a wide variety of consumer and advocacy groups (both diagnosis-specific and “cross disability”) have developed, promoting inclusion of individuals with disabilities in all spheres of social life. Examples of advocacy groups that relate to schools include organizations addressing the needs of students with hyperactivity, diabetes, Tourette’s syndrome, and cerebral palsy.

Practitioners and researchers have found that many concerns are common to a range of chronic illnesses and disabilities. For instance, a Massachusetts survey by Walker and her colleagues (1988) of over 900 parents with children with a wide range of chronic health conditions found that the perceived needs and rankings of important services needed by their children and families were more similar than different.

Coincident with the development of new technologies and changing attitudes has been the passage of state and federal laws ensuring children with disabilities the right to a public education, with related services as needed to ensure access.

Laws Related to Disability Rights and Access to Education

Chapter 766 (Mass. General Laws, C. 71B, passed in 1972)

Massachusetts has been a leader in promoting the educational rights of children with a wide range of chronic illnesses and disabilities. The landmark Massachusetts law, Chapter 766, preceded, and served as a model for, federal special education legislation. It requires public school systems to educate all children, regardless of their disabilities. Further, it requires that children with disabilities be educated in the least restrictive environment based on an individualized education plan of special education and related services. Schools are required to provide students with educational services at home or in the hospital if the students are unable to attend school for medical reasons documented by a physician. Chapter 766 incorporates all of the federal requirements regarding development of an IEP and related parents rights and due process procedures.

Under Chapter 766 regulations, the evaluation TEAM works through a formalized process to decide whether a referred student is eligible for special education. The definitions of disability and impairments are functionally based. The definition “to progress effectively in regular education” establishes the standard by which the TEAM is expected to judge whether a disability is affecting the student’s educational performance and whether the student is eligible for services. To progress effectively in regular education is defined in general terms, in recognition of the fact that student development and growth encompasses many knowledge and skill areas. “Disability” includes one or more of the following impairments: developmental delay, intellectual, sensory, neurological, emotional, communication, physical, specific learning, and health.



The steps taken to determine eligibility for special education are:

1. Student is referred for special education evaluation.
2. Parent gives permission to proceed with the evaluation process.
3. Assessments conducted are determined by areas of suspected disability based on pre-referral and referral information.
4. Assessment of the student takes place in the following areas: educational history, teacher assessment, medical assessment, specialist assessment, and psychological assessment.
5. A decision is made as to the following: "Does the student have a disability?" AND "Does that disability result in the student's inability to progress effectively in regular education?" If the answer is yes, an IEP is developed that meets the unique needs of the student and recommends placement in the least restrictive environment.

The Massachusetts Department of Education has several publications regarding Chapter 766, including the regulations, eligibility guidelines, and a parent guide to the legislation (See **Resources** at the end of this chapter).

IDEA

The federal Individuals with Disabilities Education Act (IDEA) (PL 101-476) of 1990 is an update and retitling of the 1974 Education for All Handicapped Children Act. Along with Section 504 of the Rehabilitation Act of 1973 (discussed below), IDEA defines the parameters of a school district's responsibility to provide services to disabled children.

When a student has a health-related condition, a health assessment is to be conducted by a physician and reviewed by the school nurse. Any additional relevant information should be added from the school health record. Based on this assessment, the school nurse identifies those health issues that are relevant to the student's educational progress and recommends services or program modifications that the student requires. If a student with health-related needs is determined eligible for special education and related services under Chapter 766, the student's health needs should be considered in light of the identified goals and objectives of the IEP. Where appropriate, an Individualized Health Care Plan (IHCP) may be part of the IEP or, at a minimum, should be considered an attachment to the educational plan so as to allow for the coordination of needed health care services and emergency planning for the student within the school setting.

Both the IDEA and Massachusetts Chapter 766 require school districts to provide "related services" that are needed to assist a student who has been determined eligible for special education services. In contrast, schools are not required to provide "medical



services" under the special education laws, except for certain services that are evaluative or diagnostic in nature.

The United States Supreme Court has articulated criteria to be used to determine if services needed by a student with special education needs are "related services." These criteria include: 1) "only those necessary to aid a handicapped child to benefit from special education," and 2) those "provided only if they can be performed by a nurse or other qualified person, not if they must be performed by a physician." Subsequent decisions by the United States Court of Appeals for the Second Circuit, and the United States District Courts in Pennsylvania and Utah have further refined these criteria. These court decisions concluded that the intensive nature of the services some students need go beyond the scope of the "related services" that schools are required to provide. Each court held that there must be reasonable limitations on the nursing and supportive services required under the IDEA, and that the determination is not based simply on whether the service is provided by a nurse or physician.

One critical provision of both IDEA and Chapter 766 mandates a role for parents on the team that designs the IEP. This role is supported by due process rights for parents defined by the law.

Section 504, Rehabilitation Act of 1973

Not all children with special health care conditions need to receive special education services. Some children with chronic illnesses may have health conditions that do not adversely impact their educational performance and thus may not be eligible for IDEA or Chapter 766. Children may, however, be protected by other laws related to civil rights for individuals with disabilities. Section 504 of the Rehabilitation Act of 1973 is a broad civil rights law which protects the rights of individuals with handicaps in programs and activities that receive Federal financial assistance. Public school districts are recipients of federal funds. Section 504 specifically provides:

... No qualified handicapped individual shall, solely by reason of his handicap, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity which receives or benefits from Federal financial assistance {34 C.F.R. 104.4(a)}

A person who is considered handicapped for purposes of Section 504 protections is any person who "(i) has a physical or mental impairment, which substantially limits one or more major life activities, (ii) has a record of such an impairment, or (iii) is regarded as having such an impairment" {34 C.F.R. 104.3(j)}.

A physical or mental impairment is defined as any "physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological; musculoskeletal; special sense organs; respiratory, including speech organs; cardiovascular; reproductive; digestive, genito-urinary; hematic and lymphatic; skin; and endocrine or any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities" {34 C.F.R. 104.3(j)(2)(i)}.



The U.S. Department of Education regulations implementing Section 504 define the obligations of schools and the rights of students. The regulations prohibit the exclusion of any child from school or any school program based on disability or perceived disability. The law guarantees rights of, for example, a child who has asymptomatic HIV infection or who has a parent with HIV infection. Although such a child might not be enrolled in special education, he or she is protected from discrimination or exclusion from education through Section 504 and is eligible to receive education-related services.

Section 504 does not require an IEP document but does require a plan. It is recommended that the district document that a group of persons knowledgeable about the student convened and specified the agreed-upon services.

The Americans with Disabilities Act (1990)

The American Disabilities Act of 1990 (ADA) specified that as of January 26, 1992, public entities and public accommodations must ensure that individuals with disabilities have full access to and equal enjoyment of all facilities, programs, goods, and services. The ADA extends many of the rights and duties defined by Section 504 to public accommodations such as restaurants, hotels, theaters, stores, doctors' offices, museums, private schools, and child care programs.

THE SCHOOL'S ROLE

School districts need to know the prevalence in their schools of children and adolescents with special health care needs. It is recommended that the school system conduct a health needs assessment, which includes the number and type of special health care needs in the school population each year (see Chapter 2 for a discussion of the development of a community and school health needs assessment). Appropriate services can be planned and implemented with this information.

This school assessment would include *all* children with special health care needs and not be limited solely to those requiring special education services and IEPs. The needs assessment questions may be included in the student health questionnaire and emergency care consent form completed by parents at the beginning of the school year. The student health needs assessment forms the basis for development of the health service program, and serves to identify students in need of individualized care planning.

School systems have a responsibility to educate staff, students, and parents and provide planning and services for children with special health care needs. Thoughtful planning promotes quality care for students with special health care needs in the school, and also minimizes any potential for liability, which may be a concern of many school personnel.

Different children have different special health care needs, including diseases and conditions with different levels of severity in a variety of the body's organ systems. Therefore, school districts have a responsibility to provide training regarding the specific



health condition. There is no single training program that can familiarize school nurses or other school personnel with all the health needs they may encounter. However, there are a wide variety of training materials available.

The inclusion of students with special health care needs in school settings benefits both students with special needs and their peers. For children and adolescents with special needs, it means opportunities to share the spontaneous experiences from which children learn, grow, and develop social skills. For *all* children and adolescents, it means opportunities to learn about and experience inclusion. Therefore, the child's peers, teachers, and other school personnel need to be aware of and understand the child's condition and its impact on the child's performance.

THE INDIVIDUALIZED HEALTH CARE PLAN

The development of the Individualized Health Care Plan (IHCP) is a collaborative process among the child's family, the child (when appropriate), the school nurse, the school physician (when appropriate), other school staff, community health providers, and medical specialists, where indicated. The school nurse is responsible for coordinating and/or developing the IHCP. She, along with other school health personnel, serves as the link between child/family and other school personnel, and between school personnel and community health care providers in primary and tertiary care settings.

The IHCP is individualized to reflect the child's specific medical, nursing, and educational needs, and it includes a plan for review and revision. For children who have an IEP, the health care plan should be considered in light of the IEP's goals and objectives. Where appropriate and at a minimum, the IHCP should be considered an attachment to the IEP to promote coordination of needed health care services within the school setting.

A health care plan is designed to ensure that the child receives the health services he or she needs during the school day (such as treatments, health assessments, or administration of medication). Like the IEP, this should be developed in a way that is supportive of his or her participation in the ongoing activities of classmates, such as sports and field trips. The plan should provide for the performance of health care procedures in a manner that minimizes disruption of the educational process to the individual student and other students present.

The IHCP includes policies and procedures in compliance with state, federal, and local health laws; state and federal education laws; state and federal confidentiality laws; and standards of practice for nursing and medicine.

The IHCP Planning Process

The planning process begins with the determination of need by the family, the school and/or the health provider (as soon as the child's health condition is determined). The team should develop and document strategies for nursing intervention and the care and monitoring of each student. Planning should also reflect long-range objectives and desirable outcomes for the child, including emotional, physical, cognitive and social adaptations to a health condition.



Assessment

Assessment is a systematic collection and analyses of information about the student's health; it is the function of physicians and registered nurses and can never be delegated to, or assumed by, other personnel. The essential data for assessment typically include:

- physical findings/needs/adaptations
- strengths, coping strategies
- social and emotional relationships
- family issues
- resources available/needed

A home visit is recommended for children with very complex health needs. The visit will help the school staff begin to establish a relationship with the parent(s) and child, observe the child in his or her natural environment, and see how care needs have been met prior to school entry. A home visit provides an opportunity to plan for future school attendance, plan school health services that promote family goals for self-care and independence, assess family strengths and needs, establish rapport with individuals who provide a support system for the student, and evaluate the need for community health resources. Home visits should be documented in the student's health records.

If a home visit is thought to be unnecessary or is not possible, the health care coordinator or school nurse should find an opportunity to meet with the parent(s) and child, at which time the child's health status can be reviewed.

Another component of the health assessment is the review of the physician's or other licensed provider's orders for medical intervention and equipment; it is an opportunity to learn about technology, medications, and procedures used in the child's care. The review should include orders and plans from both the primary care provider and the specialty care providers.

Family Participation

Parents should be actively engaged as planning partners. They see their child in diverse settings and thus best understand how different environments and activities affect the child's health and development. Communication between parents and school personnel frequently determines how smoothly the transition to school will occur for the child. School personnel are to protect the rights of confidentiality of the student and family.

Since family participation is of utmost importance, convenience for parents (both time and location) should be a priority when meetings are planned. Information provided by the school about the child's health, school health activities, and resources should be introduced in terms that are understandable to parents. Parents may participate in training as they are an invaluable resource to professionals involved in their child's care and can offer information regarding child-specific techniques and considerations.



When English is not the family's primary language, any required communication between the school and the family must be in the family's primary language. This includes providing appropriate translation services at all meetings, and translating applicable written materials. When parents of a child are deaf or hearing impaired, an interpreter must be provided.

Preparatory Planning Meeting

School personnel may find it useful to convene a preparatory planning meeting with parents to initiate discussion of the child's needs, map out the planning process, and identify key participants in the process.

Planning Meeting

The planning meeting is an opportunity for all the key participants, including the family, student (as appropriate), health care provider, and school personnel, to communicate, address important issues, and develop an individualized plan of care prior to school entry or reentry.

The meeting should identify the school nurse who will serve as the child's health care coordinator, as well as other contacts inside and outside the school who should also be involved in the development of the child's health care plan. The meeting provides the opportunity to organize and seek training for the special care a child will require.

The identification of the responsible party for the payment of special services or caregivers may be an issue for the school, parents, providers, or payers. Those responsible for the child's care should try to resolve financial details before the child enters school.

Depending on the child's functioning, adaptations in the classroom, the student's schedule, and routines may be required. (See Exhibit 7-1 for a list of questions about the child's functioning that should be answered by the child's physician or other health provider and discussed among school personnel.)

Training

The IHCP identifies areas in which training is needed for school personnel and/or others who may be involved in the child's care (at or in transit to or from school): teachers, administrators, lunchroom personnel, bus drivers and monitors, and other school staff. Community emergency medical service personnel may require training or briefing as well. The school nurse usually has the responsibility for organizing the training to meet a specific child's needs.

Some elements of training are generic and reflect skills or knowledge necessary or desirable for children with a variety of special health care needs or diagnoses (e.g., support for school nurses for developing specific IHCPs or group training on seizure management). Some individuals may require one-on-one training involving more specific procedures identified for care of a child.

The child's parent and a school nurse who is familiar with equipment and procedures involved in a child's care may be the appropriate trainers. Other options are the child's primary care provider, home nursing personnel, or outside consultants. For example, Project School Care (Children's Hospital, Boston) provides consultation to schools. (See **Resources** at the end of the chapter.)



CHAPTER 7

Guide to Completing an IHCP

The individualized health care plan (IHCP) should be completed by the school nurse, in collaboration with the family, provider, and other caregivers, for any child or adolescent requiring special health services in the school setting. An IHCP is designed to guide the planning process. The completed forms are the written results of the planning process, and the school nurse should become familiar with all its sections.

When completed, the IHCP should be (1) signed by the school nurse writing the plan, the child's parent(s), and primary care provider, and (2) attached to the child's special education plan or school health record. The IHCP must be modified as needs and circumstances change. Exhibit 7-2 is a sample IHCP; it may be copied or adapted freely. This section describes each of the sample IHCP forms that are contained in that exhibit.

Health Care Plan for the School Setting

This form contains pertinent information about the child, such as names of parents, addresses, and phone numbers; in addition, it provides a summary sheet for the dates of pertinent assessments, interviews, meetings, physician's orders, training, and review of the health care plan. More detailed information about these assessments is described on the Background Information sheet (see below).

Planning Checklist for IHCP and IEP Development

This is an overview of areas in which care planning for the student may be necessary. Almost every child or adolescent with a special health concern will need special considerations made by the school setting at some point in his or her school career. The set of special services potentially needed is quite broad and includes the following:

- support therapies (including physical, occupational, speech and language),
- modified physical education,
- schedule modifications,
- transportation,
- building accessibility,
- toileting or lifting assistance,
- school health services (including administration of medications, implementation of medical procedures, emergency preparations, and care coordination),
- counseling services (for school, career, and personal issues), and
- sensitivity training and support (for peers and school staff).

Key Contacts

This form is a list of key personnel responsible for the child's care, including both school and primary care providers, and person(s)



responsible for training and supervision of care, as well as the dates of the training.

Background Information

This form contains a brief medical history, home assessment summary, identified special health care needs, child's baseline health status, required medications and diet, and transportation needs. The course of the student's condition prior to the school's involvement is an important part of the database. The medical history, self care, family, and life-style factors provide a broad understanding of the student's current health status. This information will enable school personnel to recognize and/or predict patterns in a child's health status and evaluate changes over time.

Plan for Specific Procedure

This sheet contains directions on how to perform a special clinical procedure, including frequency, required equipment (storage and maintenance), child-specific information, and special considerations. For those conditions requiring labor-intensive procedures to accommodate adaptations to daily functions, staff planning and coordination are required to ensure consistency and continuity of care among the school, the home, and the health care facility or provider.

Daily Log for Procedures

This log documents child-specific information as to the administration of the procedure, including date, time, notes, observations, and the name of the person responsible.

Licensed Provider's Order for Specialized Health Care Procedure

This form is documentation of the licensed provider's order and special recommendations for administering a clinical procedure in the school setting.

Parent Authorization for Specialized Health Care

The parent or guardian must provide written permission for administering specialized health care to the student.

Possible Problems

This is a list of any problems that might occur relating to a specialized health care procedure and suggested action to be taken. (For example, in a gastrostomy tube feeding, the tube may become dislodged.)

Emergency Information

This sheet is a list of the telephone contacts for parents, key emergency providers, and local hospitals should an emergency occur.

Emergency Plan

The form is a list of potential child-specific emergencies and what to do, so that prompt, appropriate action can occur. (Note: The emergency care plan should never substitute for a comprehensive IHCP addressing *all* the student's relevant needs). The team should design and document for each student's emergency procedures. These are to be shared with other school personnel, including



ancillary staff such as lunchroom workers, custodians, and bus drivers. In addition, a simple set of instructions identifying individuals to notify should be discussed carefully with the student's parents.

Emergency Telephone Procedure

This form provides a detailed guideline for information that may be needed by the emergency medical team respondent; it identifies the school official to be notified and provides additional information as to procedures to be followed

Transition from Early Intervention

Many children with special needs are served in Early Intervention (EI) programs prior to becoming eligible for special education at age 3. EI is a community-based system of developmental services for children up to age 3 who manifest or are at risk of developmental delay. Federal and state government funds support the commonwealth's EI system and Massachusetts law (M.G.L. Chapter 721) requires that third-party insurers reimburse for these services.

In Massachusetts, the eligibility criteria for EI are quite broad and include children who experience environmental as well as biological risks. Not all children who are eligible for EI in this state will automatically be eligible for special education upon school entry. If a child moves from EI to school, it is the responsibility of both EI and school personnel to ensure a smooth transition at age 3.

A revised interagency *Policy on Early Childhood Transitions* took effect in November 1994. It is the collaborative effort of the Massachusetts Department of Education, Massachusetts Department of Public Health, Massachusetts Executive Office of Health and Human Services, and the Administration for Children and Families (Region 1) of the U.S. Department of Health and Human Services. Part of the policy requires that a child in an EI program who is eligible for special education services has an IEP developed by the child's school district in place, with special education services provided by the school district in accordance with the IEP, commencing on the child's third birthday.

Entry into school may be a stressful period for a child with special health care needs, as well as for his or her family. Thoughtful preparation by those closely connected with the child can make changes less difficult for all involved. The success of the transition from EI to public school is dependent on the development of communication and trust among the child's family, the EI program, and the school.

Since efforts to plan services for students require close collaboration between families and school personnel, a program will be most successful if it addresses the priorities of the family and capitalizes on its strengths and abilities. As the transition to school approaches, parents and staff from agencies involved with the child's care should share information with one another about the child. Communication will help to avoid duplication of assessments, evaluations, and resources, and additional information needed can be more effectively obtained.

Parents should notify the school as early as possible when a child with special health care needs will be enrolling, especially one who



needs medical care on an ongoing basis (e.g., for diabetes, cancer, asthma) or even a child whose needs are short-term (e.g., an infection requiring antibiotics). When the child's health needs are extensive, notification of at least six months before school entry (as soon as possible after the child reaches 2.6 years old) is critical for adequate health and safety planning. The following are necessary for facilitating a comfortable and successful transition process:

- Adhere to a timely referral process.
- Ensure timely transfer of updated medical and developmental evaluations with recommendations.
- Schedule a meeting with parents and the EI provider.
- Ensure communication between the early childhood coordinator and/or the special education director, teacher, nurse, school physician, and therapists for the purpose of sharing information.
- Provide opportunities for parents to visit preschool settings.
- Provide an opportunity for parents to obtain information on Chapter 766.
- Recommend parent-to-parent support network(s) such as parent advisory councils for assistance.

Other referral sources may include primary care providers in the community, hospital clinic staff, case managers from the Department of Public Health or other state agencies, Project School Care at Children's Hospital, Boston, home care providers, or parents themselves. If a referral is made by anyone other than parents, parental consent is required. The parents of a child with HIV, for example, are under no obligation to inform a new school of their child's health status. If they do choose to tell school personnel, parents alone, in consultation with the primary care provider, should decide which individuals they wish to inform about their child's health status (see Chapter 8).

School personnel can promote timely notification about enrollment of children with special health care needs by building close ties with health care providers in their communities and in surrounding areas. Maintenance of a formal and systematic procedure for transition is crucial for schools and EI programs, but informal communication can be helpful as well. Conferences and training programs, for example, can provide opportunities to build a network of contacts to facilitate school entry for children with special health care needs.

SELECTED CHRONIC CONDITIONS

School personnel should be trained to monitor children with chronic health conditions, to ensure that they receive appropriate and timely care, as well as to prevent emergencies or intervene should an emergency arise.

Asthma

Asthma is the leading chronic health condition in children, and it is one of the leading causes of school absence for illness. Across the nation, approximately 3 million children under the age of 18 have been diagnosed with asthma, a chronic lung disease characterized by episodes or attacks of breathing problems such as coughing, wheezing, chest tightness, and shortness of breath. These symptoms are caused by an inflammation of the airways responding to a variety of stimuli or “triggers.” The triggers that cause an asthma episode vary with individuals. Common triggers include:

- *Allergens* such as pollen, animal dander, dust mites, and molds.
- *Irritants* such as cold air, strong odors, weather changes, cigarette smoke, chemicals, etc.
- *Upper respiratory infections* such as a cold or flu.
- *Physical exercise*, especially in cold weather.

Students who have asthma can learn to identify their own individual early warning signs — physical changes that occur in the early stage of airway inflammation. Early warning signs may include changes in breathing, an itchy chin or neck, or clipped speech, and when noted by a student, should always be taken seriously. An asthma episode can be separated into an early phase and a late phase. Knowing the early warning signs means a student can take medication early when asthma is easiest to control. School personnel should encourage students to be aware of these early symptoms and to take proper action immediately to prevent an acute episode.

Asthma can be controlled with proper diagnosis and management; it cannot be cured. Traditionally, asthma care has focused on treating acute episodes. New approaches emphasize preventing episodes by reducing inflammation in the lungs and avoiding irritants and allergens. When asthma is managed effectively, the student may be able to enjoy unrestricted participation in all school activities. This can be accomplished by:

- Recognizing and acknowledging the student’s breathing complaints.
- Recognizing the early warning signs of an asthma attack.
- Avoiding or controlling triggers.
- Safeguarding the child against environmental irritants.
- Taking medication as directed. (Individuals with asthma may need two types of medication; one to relax the airways, the other to decrease the inflammation in the airways.)
- Monitoring asthma with a peak flow meter, which measures how well air is moving through the lungs; when the airways are narrow, this measurement will be decreased.
- Monitoring child’s use of inhaler; determining whether child can carry inhaler with him or her.



Effective management of asthma requires a partnership among the student, parent(s) or guardian(s), the physician or other primary care provider, and other adults who work with the child at school including the principal, the bus driver, the school nurse, the classroom teacher, the physical education instructor or coach, and the guidance counselor. The school team should develop an IHCP for the student that includes, but is not limited to, the following:

- A list of medications and a plan for taking them especially noting which ones need to be taken during school hours. (See Chapter 6 for regulations governing administration of prescription medications in public and private schools.)
- Plans for daily management.
- Environmental safeguards.
- A specific plan of action for school personnel in case of an acute episode.
- Specific plans for staff members to educate, counsel, and support the child toward self-management of asthma.
- A clearly defined emergency plan, including instructions for transportation and use of oxygen.

See **Resources** at the end of the chapter for a list of organizations addressing asthma, and Exhibit 7-2 for the IHCP forms.

Diabetes

For youngsters, living with insulin-dependent diabetes mellitus (IDDM), also known as Type 1, means having to live with diabetes at school. IDDM is the most common endocrine disorder of youth and affects about 1 in 800 youngsters. It is not contagious and is not caused by eating too much sugar. IDDM is never treated by diet alone or with pills, and, therefore, is very different from the much more common non-insulin-dependent diabetes, also known as Type 2. Because successful attempts to lower average blood glucose have been proven scientifically to delay or postpone the devastating long-term complications of diabetes (blindness, kidney failure, and nerve damage), aggressive management of IDDM may involve frequent blood glucose monitoring with four or five insulin injections each day. Some of this treatment may routinely occur during school hours. The management of a student's diabetes should be incorporated in a student's overall IHCP.

Schooling for children and adolescents with diabetes should be no different from that of any other child. Knowledgeable and supportive school staff can assist in the treatment of diabetes so that there is minimal interference with learning objectives. Age-appropriate behavior, participation, and educational goals typically do not demand extraordinary adaptations due to diabetes. In cooperation with the family and the diabetes treatment team, schools should encourage students with diabetes to reach their full potential.

Insulin

Dosage of insulin is determined by body size, activity level, state of health, dietary intake, and duration of diabetes rather than severity of diabetes. Student responsibility for insulin injecting should occur



when the child's emotional maturity indicates this is an appropriate goal, and is agreed upon by the parents, the child, and health care professionals. The school nurse is responsible for insulin administration and/or supervision as specified in the IHCP and consistent with regulations governing the administration of prescription medications in public and private schools. (See Chapter 6).

Food

Meal plans are a key component of diabetes treatment and should take into account food preferences and balance insulin and activity needs. A diabetes meal plan should provide a consistent source of food without large amounts of concentrated sugars. A food plan is a "diet" only when obesity coexists with IDDM. Adjustments for activity changes are also required, and snacking needs should be based on blood glucose results, with advice from the diabetes treatment team. Whether or not eating school lunches is permitted depends on treatment goals, fat content of meals, and how inconsistent the nutritional content of each meal is from day to day. School departments should provide fresh, tasty, and inexpensive meal options for everyone, not just those with diabetes (see Chapter 9).

Special events or holidays do not always have to be celebrated with sugary foods or snacks. Children and teenagers should be able to participate while only minimally changing what is served if the responsible adults in the school allow for sufficient planning to occur at home and in consultation with the health care team. It is wise to avoid being too judgmental with those having diabetes because there may be times when their "cheating" is nothing more than appropriately treating hypoglycemia. Children with diabetes who school personnel suspect may be at risk for eating disorders (either weight loss or obesity) should be referred for evaluation by school health staff and/or their primary care provider.

Gym and Recess

School exercise may appear to present a source of concern because students with diabetes cannot automatically counterbalance changing physical demands without prior planning. Ideal scheduling would provide for gym periods at the same time each day so that food or insulin adjustments can be made appropriately. When and whether extra food should be provided should be discussed with the health care provider. The worst time for gym is the hour just prior to lunch, when most of the morning food has begun to "wear off" and the likelihood of insulin-induced hypoglycemia is at its peak.

School Participation

Children with diabetes typically can be full participants in both curricular and extracurricular school life, including field trips. Diabetes should not be an excuse to avoid gym periods, nor should it be an excuse to avoid full academic and social involvement in the school program. School attendance should be monitored by parents, school nurses, and teachers so that excess absence can be documented and brought to the attention of the health care professionals involved with the diabetes treatment program as it may reflect poor glucose control.



Glucose Monitoring

Monitoring of diabetes (staff should avoid using the word *testing* just as they should try to avoid *diabetic* and *dieting* because of their subtle negative connotations) has changed in recent years so that more and more youngsters are checking their own “finger-stick” blood sugar levels. Some teachers have creatively used these numbers to help explore averages, ranges, and graphing and to make abstract concepts come to life.

Hypoglycemia

Hypoglycemia occurs when the blood glucose level is too low for the body to function properly. It is caused by excess insulin in the system or too little food, often brought about by unplanned excess activity. The best way to document that a hypoglycemic reaction (also called an insulin reaction) is taking place is to observe symptoms and obtain a blood sugar level at that moment. Teachers, principals, coaches, and school nurses may be taught by the school nurse to obtain a drop of blood from a finger tip and use blood glucose strips to confirm hypoglycemia. Obtaining actual blood glucose levels is necessary for appropriate treatment decisions.

Mild hypoglycemia can cause very subtle symptoms which school staff should learn to recognize: inattentiveness, mood or behavioral changes, poor penmanship, or lower-than-expected achievement on an exam. Tremulousness, pallor, headache, or stomach pains can be caused by low blood sugars. *Moderate hypoglycemia* is similar, but the symptoms are of slightly greater intensity or duration.

Treatment of mild or moderate hypoglycemia typically consists of one of the following, or comparable substitutes: two or three glucose tablets, or 4 to 6 ounces of juice or regular soda (no extra sugar needed), or seven Lifesavers (any flavor). Such treatment typically will correct hypoglycemia 90% of the time within 15 minutes, and it rarely needs repeating. The licensed provider should give instructions as to the appropriate treatment of hypoglycemia for the individual child. Some teachers have identified one or two classmates to serve as “hypoglycemia buddies” and to assist if a visit with the nurse is needed. *Under no circumstances should a student suspected of having hypoglycemia be permitted to go to the nurse alone.*

Severe hypoglycemia produces the same symptoms plus either loss of consciousness or convulsions. Treatment of a rare daytime episode of severe hypoglycemia may require an injection of glucagon (or intravenous glucose if paramedics are present). The child's health care provider orders the treatment specific to the individual child. Plans for contacting the physician, parent, or medics should be in place for such rare emergencies (as part of the IHCP). Usually severe hypoglycemia does not occur unless several factors converge and contribute to the reaction simultaneously such as delayed meals or snacks with extra activity or in association with major emotional trauma. Modern diabetes treatment does not preclude occasional episodes of hypoglycemia. Teachers should be encouraged to learn about hypoglycemia so that it can be prevented or at least easily treated in its early stages *in the classroom.*



Ketoacidosis

Diabetic ketoacidosis (DKA) is seriously elevated blood sugar levels associated with dehydration and coma and is very unlikely to occur during school hours. In contrast to hypoglycemia, it does not develop quickly or unexpectedly and is most often associated with an intercurrent infectious disease such as a viral illness. Most children with diabetes may need to stay at home when they are ill to ensure they receive extra monitoring, extra salty fluids, and extra insulin. Recurrent DKA is often the result of omitted insulin injections or other physical/psychological stresses.

Psychosocial Issues

With a diagnosis of diabetes, many psychosocial sensitivities may emerge. It is important to emphasize that children with diabetes are not "diabetic children;" the preferable phrase is *child with diabetes*. This point about appropriate terminology is true of all children with special health care needs. Up-to-date information about diabetes for all school nurses, administrators, and teachers will make school a safe place for individuals with diabetes. Creatively using the process of diabetes management as a resource for education encourages increased self-esteem for a student with diabetes. Science or math lessons that reflect day-to-day issues about diabetes, nutrition, and data collection make learning fun and pertinent. Books which include diabetes as part of the subject matter are useful to teach about medical conditions that may otherwise be viewed as disabling.

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RESOURCES

Association for the Care of Children's Health
7910 Woodmont Avenue, Suite 300
Bethesda, MD 20813
(301) 654-6549

Clinical Genetics and Child Development Center
Dartmouth-Hitchcock Medical Center
One Medical Center Drive
Lebanon, NH 03756-0001
(603) 650-6067

Easter Seal Society
484 Main Street
Worcester, MA 01608
(508) 757-2756

Federation for Children with Special Needs
95 Berkeley Street, Suite 104
Boston, MA 02116
(617) 482-2915

Massachusetts Commission for the Deaf and Hard of Hearing
600 Washington Street, Suite 600
Boston, MA 02111
(617) 727-5106; (800) 882-1155
Interpreter Request Line (617) 727-1154

Massachusetts Department of Education
Division of Special Education
350 Main Street
Malden, MA 02148-5023
(617) 388-3300 ext 416

A Parent's Guide to Special Education Regulations (1992)
Eligibility Guidelines for Special Education (1992)
Chapter 766 Regulations (1991)

Massachusetts Department of Public Health
Division for Children with Special Health Care Needs
150 Tremont Street
Boston, MA 02111
(617) 727-6941

Massachusetts Head Injury Association
484 Main Street, Suite 325
Worcester, MA 01608
(508) 795-0244

CHILDREN WITH SPECIAL HEALTH CARE NEEDS



National Information Center for Children and Youth with Disabilities
PO Box 1492
Washington, DC 20013
(800) 695-0285

National Organization for Rare Disorders (NORD)
100 Route 37
PO Box 8923
New Fairfield, CT 06812
(800) 999-NORD

New England Center for Deaf-Blind Services
175 North Beacon Street
Watertown, MA 02172
(617) 924-3434

Project School Care
Children's Hospital
Gardner 6, 300 Longwood Avenue
Boston, MA 02114
(617) 735-6714

Attention Deficit Disorders (ADD, ADHD)

Attention Deficit Information Network
National Office
475 Hillside Avenue
Needham, MA 02194
(617) 455-9895

Children and Adults with Attention Deficit Disorders (CH.A.D.D.)
National Office
499 Northeast 70th Avenue, Suite 109
Plantation, FL 33317
(305) 587-3700

Children and Adults with Attention Deficit Disorders of Northern
MA/Southern NH
Parent Coordinator
48 Vandette Street
Dracut, MA 01826

Asthma/Allergy

American Academy of Allergy and Immunology
611 East Well Street
Milwaukee, WI 53202
(800) 822-2762

American College of Allergy and Immunology
85 West Algonquin, Suite 550
Arlington Heights, IL 60005
(800) 842-7777

American Lung Association of Boston
1505 Commonwealth Avenue
Brighton, MA 02135
(617) 787-5864

American Lung Association of Middlesex County
5 Mountain Road
PO Box 265
Burlington, MA 01803
(617) 272-2866



CHAPTER 7

Asthma/Allergy Foundation of America
New England Chapter
220 Boylston Street
Chestnut Hill, MA 02167
(617) 965-7771

Breathless Inc.
Asthma and Allergy Support Network for the Merrimack Valley
3 Washington Square, Room 220
Haverhill, MA 01830
(508) 373-8075

Healthy Kids: The Key to Basics
Promoting Health and Educational Equity for Students with Asthma
and Other Chronic Health Conditions
79 Elmore Street
Newton, MA 02159-1137
(617) 965-9637
Fax: (617) 965-5407

Provides written materials, workshops, and consultation.

Mothers of Asthmatics
Allergy and Asthma Network
3554 Chain Bridge Road, Suite 200
Fairfax, VA 22030-2709
(800) 878-4403

National Asthma Education Program Information Center
National Heart, Lung and Blood Institute
U.S. Department of Health and Human Services and U.S.
Department of Education
PO Box 30105
Bethesda, MD 20824-0105
(301) 251-1222
Fax: (301) 251-1223

Publishes Managing Asthma: A Guide for Schools (Pub # 91-2650) and AsthmaMemo and other publications.

National Jewish Center for Immunology and Respiratory Medicine
1400 Jackson Street
Denver, Colorado 80206
(800) 222-LUNG

Autism

Autism Support Center
64 Holten Street
Danvers, MA 01923
(508) 777-9135

Diabetes

American Diabetes Association
40 Speen Street
Framingham, MA 01701
(800) 229-2559

Diabetes Treatment Center
5 Hope Avenue
Waltham, MA 02254-9116
(617) 647-6222



Joslin Diabetes Center
One Joslin Place
Boston, MA 02215
(617) 732-2400

Juvenile Diabetes Foundation
381 Park Avenue South, Suite 507
New York, NY 10016
(212) 689-2860

New England Diabetes and Endocrinology Center
25 Boylston Street, Suite 211
Chestnut Hill, MA 02167
(617) 232-6709

Youth Services Committee of the Massachusetts
Affiliate of the American Diabetes Association
(508) 879-1776

Hemophilia

National Hemophilia Foundation
Soho Building
110 Greene Street, Suite 303
New York, NY 10012
(212) 219-8180

New England Hemophilia Association
180 Rustcraft Road
Dedham, MA 02026-4539
(800) 228-NEHA; (617) 326-7645

Sickle Cell Anemia

New England Regional Newborn Screening Program
Sickle Cell Division
State Laboratory Institute
305 South Street
Jamaica Plain, MA 02130
(617) 522-3700, ext. 457

Spina Bifida (Myelodysplasia)

Arnold-Chiari Family Network
c/o Kevin and Maureen Walsh
67 Spring Street
Weymouth, MA 02188

Massachusetts Spina Bifida Association
24 Wentworth Road
Melrose, MA 02176
(617) 239-1919

New England Myelodysplasia Association
175 South Bradford Street
North Andover, MA 01845
(508) 794-9689

A network of nurses, other health professionals, and parents working with myelodysplasia to improve education and clinical services. Publishes *Just like Me? Children Talk about Spina Bifida*, a video produced in conjunction with the Massachusetts Health Research Institute, Inc.



CHAPTER 7

New England Regional Genetics Group
PO Box 670
Mount Desert, ME 04660
(207) 288-2704

Rowley-Kelly, Fern L., and Reigel, Donald H. (1993). *Teaching the Student with Spina Bifida*. Baltimore: Paul H. Brookes Publishing Co., P.O. Box 10624, Baltimore, MD 21285.

Spina Bifida Association of America
4590 MacArthur Boulevard NW, Suite 250
Washington, DC 20007-4226
(202) 944-3285; (800) 621-3141

Provides information and referral service; publishes bimonthly newsletter, *Insights and Spotlights*, on topics of importance to individuals with spina bifida, families, and professionals.; includes a Nursing Council; and sponsors a yearly conference.

Guidelines for the Management of Students with Genetic Disorders: A Manual for School Nurses: The chapter on myelodysplasia provides comprehensive information including etiology, pathophysiology, clinical manifestations and interventions, primary health care, psycho-social and educational impact. A nursing care plan in the IEP format is outlined.

Myelodysplasia Team Clinics in Massachusetts:

Children's Hospital, Myelodysplasia Clinic
300 Longwood Avenue
Boston, MA 02115
(617) 735-7641

Franciscan Children's Hospital, Myelodysplasia Clinic
20 Warren Avenue
Boston, MA 02135
(617) 254-3800, ext. 4280

Massachusetts Hospital School, Myelodysplasia Clinic
3 Randolph Street
Canton, MA 02021
(617) 828-2440, ext. 216

New England Medical Center Hospital, Myelodysplasia Clinic
750 Washington Street
Boston, MA 02111
(617) 956-5452

Shriners Hospital, Myelodysplasia Clinic
516 Carew Street
Springfield, MA 01104
(413) 787-2069

Technology-Dependent Children

Project School Care
Children's Hospital
300 Longwood Avenue
Boston, MA 02115
(617) 735-6714; Fax (617) 735-7940



Project School Care was established to document and foster access to educational services by children who are assisted by medical technology. Project School Care provides consultation to educators, families, and school nurses in the planning process for entrance into school of children with special health care needs.

Educational seminars and in-service programs for families, educators, administrators, specialists, and nurses are offered locally and nationally. A nine-session school nurse training program, Planning for Students Assisted by Medical Technology, is offered each spring at Children's Hospital in Boston. The curriculum is intended to prepare school and community health nurses with the knowledge and clinical skill background to provide updated health care for students assisted by medical technology. In addition, Project School Care offers a Train the Trainer Institute on Developing and Implementing the School Nurse Clinical and Didactic program.

Publications from Project School Care include:

Children Assisted by Medical Technology in Educational Settings: Guidelines for Care.

A manual to help schools and families develop individualized programs for children assisted by medical technology.

Children Assisted by Medical Technology in Educational Settings: Resources for Training.

A catalog presenting resource materials in print and video that facilitate the training of school and other community personnel.

Working Toward a Balance in Our Lives: A Booklet for Families of Children with Disabilities and Special Health Care Needs.

A resource book for families providing practical advice and suggestions on a range of topics and including a list of resource organizations.



EXHIBIT 7-1

Questions Educators Frequently Ask Physicians About Chronically Ill Children for Program Planning and Daily Management Procedures

A set of questions about the child's functioning should be answered by the child's physician or other health care provider and discussed among school personnel:

1. Does the child's present condition require any specific physical or environmental adaptations?
2. Can the child participate in physical education and on any sports team without restrictions?
3. Is there a need to shorten or modify the school day?
4. Is the child presently taking medication? How will it affect the child's behavior?
5. Are there special emergency precautions that should be learned by school staff?
6. Does the child need special protective equipment?
7. Does the child use any special equipment?
8. Should the child have preferential seating?
9. Does the child need physical, occupational, or speech therapy?
10. Should the child receive special counseling?
11. Does the child require a modified diet?
12. Does the child need assistance with toileting?
13. What is the prognosis of the child for the future?
14. What is the child's understanding of the problem and his/her present condition? Are further explanations necessary?

(Adapted with permission from Walker D.K. (1984). Care of chronically ill children in school. *Pediatric Clinics of North America*, 31:221.)



EXHIBIT 7-2

SAMPLE INDIVIDUALIZED HEALTH CARE PLAN (IHCP) HEALTH CARE PLAN FOR THE SCHOOL SETTING

(Health Care Coordinator)

(Education Coordinator)

Student Information:

(Name)

(Birthdate)

(Grade)

(School)

(Parent/Guardian)

(Address)

Mother () _____
(home)

() _____
(work)

Father () _____
(home)

() _____
(work)

Preparation for Entry/Development of Health Care Plan

☐ Home Assessment

(Date)

by

(Name, Title)

Summary

(Date)

Parent Interview

(Date)

Student Interview

(when appropriate) (Date)

☐ Medical History

(Date)

☐ Planning Meetings

(Date)

(Date)

(Date)

☐ Staff Training Meetings

(Date)

(Date)

(Date)

☐ Educ. Team Meeting

(Date)

(Date)

(Date)

Doctor's Order

(Date)

Child-Specific Care-giver
Training (Skills Checklist)

(Date)

Parent's Consent

(Date)

Next Training Review

(Date)

Child-Specific
Procedural Guidelines

(Date)

Health Care Plan
Included in IEP:

(Date)

Emergency Plan

(Date)

Next Review of Health
Care Plan

(Date)

Health Care Plan
Included in Child's Record

(Date)



CHAPTER 7

PLANNING CHECKLIST FOR IHCP AND IEP DEVELOPMENT For Students with Special Health Care Needs

FAMILY

- ☐ Goals/priorities
- ☐ Liaison
- ☐ Collaboration
- ☐ Communications
- ☐ Other

HEALTH SERVICES

- ☐ Health assessment, including student strengths
- ☐ Individualized health care plan
- ☐ Emergency plans
- ☐ Health status monitoring
- ☐ Specialized health procedure
- ☐ Health teaching/counseling
- ☐ Medication
- ☐ Personnel training
- ☐ Personnel supervision
- ☐ Staff consultation
- ☐ Family support/liaison
- ☐ Physician consultation/orders
- ☐ Parent authorization(s)
- ☐ Release of info to/from health care provider
- ☐ Other

TRANSPORTATION

- ☐ Vehicle
- ☐ Access
- ☐ Safety
- ☐ Equipment
- ☐ Positioning
- ☐ Emergency plan
- ☐ Communications
- ☐ Special assistance
- ☐ Evacuation
- ☐ Aide
- ☐ Other

TUTORING/HOME/HOSPITAL

- ☐ Supplemental in-school tutor — regular, intermittent
- ☐ Plan for continuous programming — school/home/hospital
- ☐ Extra set of books at home
- ☐ Regular home/hospital program
- ☐ Other

OTHER PROGRAM ADAPTATIONS

- ☐ Curriculum/instruction
- ☐ Special equipment
- ☐ Activities of daily living
- ☐ Scheduling of health interventions
- ☐ Positioning
- ☐ Mobility
- ☐ Special diet
- ☐ Other

ACCESS

- ☐ School entrance
- ☐ Hallways
- ☐ Stairs/elevator
- ☐ Classroom/specials
- ☐ Bathroom
- ☐ Health room
- ☐ Cafeteria
- ☐ Library
- ☐ Locker
- ☐ Gym
- ☐ Playground
- ☐ Other

FIRE SAFETY

- ☐ Evacuation plan
- ☐ Evacuation practice
- ☐ Back-up plan
- ☐ Other

SCHEDULING

- ☐ Length of day
- ☐ Number of days
- ☐ Rest periods
- ☐ Flexible schedule
- ☐ Testing schedule
- ☐ Other

THERAPIES

- ☐ Occupational therapy
- ☐ Physical therapy
- ☐ Speech language pathology
- ☐ Other

OTHER RELATED SERVICES

- ☐ Social work
- ☐ Counseling
- ☐ Psychology
- ☐ Other

EXTRACURRICULAR ACTIVITIES

- ☐ Special learning opportunities
- ☐ Extended day program
- ☐ Clubs
- ☐ Sports
- ☐ Social events
- ☐ Transportation
- ☐ Access
- ☐ Other

FIELD TRIPS

- ☐ Medication plan
- ☐ Emergency plan
- ☐ Personnel
- ☐ Transportation
- ☐ Other

The original version of this checklist was published by the Federation for Children with Special Needs as "Checklist of items for consideration in developing IEPs for students with physical disabilities or special health needs." This adaptation appeared, with permission, in *Serving Students with Special Health Care Needs*, Connecticut State Department of Education, 1992. It is used here with the permission of both sources.

CHILDREN WITH SPECIAL HEALTH CARE NEEDS



KEY CONTACTS

Name _____ Date _____

Primary Health Care Providers

Telephone Numbers

School Contacts

Direct Caregivers

Child-Specific

Training

General

Substitute Caregivers

Back-up Staff

Child-Specific Training Done By

General Staff Training Done By

Supervision Provided By

(Date)

(Date)

(Frequency)

[Used with permission of Project School Care, Children's Hospital, Boston, MA.]



CHAPTER 7

BACKGROUND INFORMATION

Name_____ Date_____

Brief Medical History:

Home Assessment Summary:

Special Health Care Needs of the Child:

Baseline Status:

Medication:

Diet:

Transportation Needs:

CHILDREN WITH SPECIAL HEALTH CARE NEEDS



PLAN FOR SPECIFIC PROCEDURE

Name _____ Date _____

Procedure: _____

Frequency: _____ Times: _____

Position of student during procedure: _____

Ability of the student to assist/perform procedure: _____

Suggested setting for procedure: _____

Equipment:

Daily: _____ Emergency: _____

_____	_____
_____	_____
_____	_____
_____	_____

Checked by: _____ Checked by: _____

Storage: _____ Storage: _____

Maintenance: _____ Maintenance: _____

Home Care Co.: _____ Phone: _____

Child-specific techniques and helpful hints:

Special considerations and precautions:

[Used with permission of Project School Care, Children's Hospital, Boston, MA.]



CHAPTER 7

DAILY LOG FOR PROCEDURES

Name _____ School _____

Procedures _____

Parent _____ Phone _____

Date/Time	Procedure Notes	Observations	Name of Provider

[Used with permission of Project School Care, Children's Hospital, Boston, MA.]

CHILDREN WITH SPECIAL HEALTH CARE NEEDS



LICENSED PROVIDER'S ORDER FOR SPECIALIZED HEALTH CARE PROCEDURE

Student's Name: _____ Birthdate: _____

Address: _____

Procedure: _____

☐ I have reviewed the Health Care Plan and approve of it as written.

☐ I have reviewed the Health Care Plan and approve of it with the attached amendments.

☐ I do not approve of the Health Care Plan. A substitute plan is attached.

Other recommendations:

Duration of the Procedure:

(Date)

Physician's Signature: _____

Date: _____

Address: _____

Phone: _____

[Adapted with permission from: *Pupil Personnel Services. Recommended Practices and Procedures Manual.*
Illinois State Board of Education. 1983.]



CHAPTER 7

PARENT AUTHORIZATION FOR SPECIALIZED HEALTH CARE

We (I), the undersigned, who are the parents/guardians of

(Name)

(Birthdate)

request that the following health care service(s)

be administered to our child. We understand that a qualified designated person(s) will be performing the above-mentioned health care service. It is our understanding that in performing this service, the designated person(s) will be using a standardized procedure which has been approved by our physician.

(Physician's Name)

(Address)

(Phone)

We will notify the school immediately if the health status of _____ changes, we change physicians, or there is a change or cancellation of the procedure.

We understand that the above procedure should be scheduled before or after school hours whenever possible.

Signature of
parents/guardians _____

Address:

Phone: (Home) _____ (Work) _____

Date: _____

[Adapted with permission from: *Pupil Personnel Services. Recommended Practices and Procedures Manual.*
Illinois State Board of Education. 1983.]

Name _____ Date _____

[Used with permission of Project School Care, Children's Hospital, Boston, MA.]



CHAPTER 7

EMERGENCY INFORMATION

Name: _____ Birthdate: _____

Address: _____ Telephone: _____

Mother: _____ Work: _____ Home: _____

Father: _____ Work: _____ Home: _____

Guardian: _____ Work: _____ Home: _____

Other contact: _____ Phone: _____

Emergency Numbers:

EMT: _____ Telephone: _____

Fire: _____ Telephone: _____

Police: _____ Telephone: _____

Home Care Co.: _____ Telephone: _____

Ambulance: _____ Telephone: _____

Gas Co.: _____ Telephone: _____

Electric: _____ Telephone: _____

Preferred Hospital:

_____ Telephone: _____

Local Hospital Emergency Room:

_____ Telephone: _____

Primary Physician: _____ Telephone: _____

Dentist: _____ Telephone: _____

Specialists:

_____ Telephone: _____

_____ Telephone: _____

_____ Telephone: _____

CHILDREN WITH SPECIAL HEALTH CARE NEEDS



EMERGENCY PLAN

Name: _____ Date: _____

Child-Specific Emergencies:

If You See This	Do This

If an emergency occurs:

1. Stay with the child.
2. Call or designate someone to call the nurse.

State who you are:

State where you are:

State problem:

3. The school nurse will assess the child and decide whether the emergency plan should be implemented.
4. If the school nurse is unavailable, the following staff members are trained to deal with an emergency and to initiate the emergency plan:

[Used with permission of Project School Care, Children's Hospital, Boston, MA.]



CHAPTER 7

EMERGENCY TELEPHONE PROCEDURE

Name: _____

1. Dial 911 and/or designated ambulance company.

2. State who you are: "I am _____, a nurse/teacher/
para-professional in the
_____ school."

3. State where you are:

School name: _____

Address: _____

City: _____

4. State what is wrong with the child.

5. Give specific directions (e.g., which school entrance should be used, location of child).

6. Don't hang up. Ask for the information to be repeated and provide any other necessary information. Hang up when all information has been received and is correct.

7. Notify:

a. School principal or school official in charge of the building at that time

b. School back-up personnel _____

State:

"Emergency plan for _____ is in effect."

"The student is located _____."

8. The school official will:

a. Meet the EMTs.

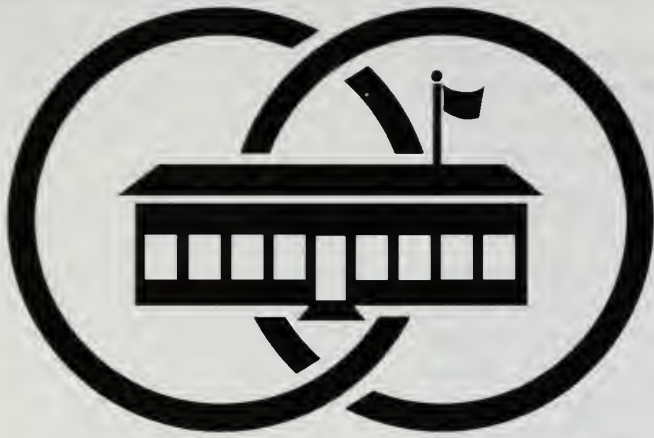
b. Direct EMTs to the emergency area.

c. Call parents and other necessary individuals (including primary care provider).

An adult should be designated to accompany the child in the ambulance.

Hospital that the child should be transported to: _____

[Used with permission of Project School Care, Children's Hospital, Boston, MA]



Chapter 8

INFECTIOUS DISEASE CONTROL

Massachusetts Law And Infectious Diseases and Immunizations

Infectious Diseases

Vaccine-Preventable Diseases

Diseases Spread Through the Intestinal Tract

Diseases Spread Through the Respiratory Tract

Diseases Spread Through Direct Contact

Diseases Spread Through Blood Contact

Noncontagious Infectious Diseases

Diseases Spread from Animals to People

Sports-Related Infectious Diseases



Chapter 1

Chapter 1: Introduction to the Course

Chapter 1: Introduction to the Course

Chapter 1: Introduction to the Course

Chapter 1: Introduction to the Course

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Chapter 1: Introduction to the Course



Infectious diseases are illnesses caused by infection with specific germs: viruses, bacteria, fungi, or parasites. Infectious diseases that can be spread from one individual to another are called contagious or communicable diseases. These contagious illnesses are one of the major problems that school health programs face, causing both staff and student absence, as well as discomfort.

This chapter describes infectious diseases which may occur in the school setting and measures to prevent their spread. However, responsibility for the care of the individual student rests with the family and his or her source of medical care. In all cases diagnosis, testing, treatment, and follow-up must be performed by properly trained, licensed, registered or certified medical personnel.

Infectious disease control measures in schools include:

- Preventing illness from spreading,
- Requiring certain immunizations,
- Reporting some illnesses,
- Temporarily excluding some children who are ill, and
- Being prepared.

MASSACHUSETTS LAW AND INFECTIOUS DISEASES AND IMMUNIZATIONS

Disease Reporting and Control

Some disease control activities are required by law or regulation. The Commonwealth of Massachusetts public health regulations and the Massachusetts General Laws (M.G.L.) govern the reporting and control of communicable diseases. The regulations establish isolation and quarantine requirements for certain types of cases and their contacts in the school and health care setting, including attendance guidelines for non-immune students from schools when cases of vaccine-preventable diseases are reported (105 CMR 300.000, M.G.L. c. 111, s. 3, 6, 7, 109, 110, 111, 112). A list of the reportable diseases, which are subject to control under isolation and quarantine regulations and general reporting duties, is provided in Exhibit 8-1. Additionally:

- Illnesses due to food consumption must be reported to the local board of health; and
- When vaccine preventable diseases (measles, mumps, rubella, diphtheria, tetanus, pertussis, *haemophilus influenzae* type B, or hepatitis B) occur, they must be reported to the board of health and regional Massachusetts Immunization Program (MIP) epidemiologists.

In addition, any outbreak of any disease can be reported directly to the Division of Epidemiology and Immunization of the Massachusetts Department of Public Health (MDPH) (617) 522-3700 x. 420). (See **REFERENCES** at the end of this chapter for more information.)

Immunizations

A compulsory school immunization law has been in effect in Massachusetts since 1967, with amendments in 1971, 1972, 1985, and 1991. The law currently requires students to be vaccinated



against polio, diphtheria, tetanus, pertussis (to their seventh birthday), measles, mumps, and rubella (M.G.L. c. 111, ss. 5, 6, and 7 and c. 76, ss. 15 and 15 c.). The law requires additional immunizations as specified by MDPH.

Massachusetts immunization regulations specify minimum immunization requirements for enrollment in school (105 CMR 220.000). These regulations are revised periodically to incorporate any changes in the requirements. Some required immunizations may be added or eliminated accordingly. The law and regulations provide for exclusion of students from school if immunizations are not up to date, but permit exemptions for medical and religious reasons. Exhibit 8-2 contains a table with minimum number of immunizations required for school attendance, as of Fall 1995.

Immunization requirements are revised periodically to reflect the most recent recommendations of the Advisory Committee on Immunization Practices (ACIP) and the American Academy of Pediatrics (AAP). For instance, beginning in 1995, a second dose of measles vaccine will be required for all children on entry to kindergarten. Hepatitis B vaccine has been recommended for all infants since 1992. In 1996, it will be required for entry into kindergarten for all children born after January 1992. The regional MIP epidemiologist can provide the most current requirements.

Children in preschool programs are now required to be immunized according to the most recent MDPH recommended schedules.

Some students entering school have not been immunized on schedule or lack immunization documentation. Regional MIP epidemiologists can provide the most recent immunization recommendations for children who are behind schedule.

Standard immunization record forms are available to facilitate record keeping for children in schools and day care facilities. The MIP provides all primary care providers with copies of an official *Massachusetts Lifetime Health and Immunization Record* (Blue Book), where a record of a child's immunization schedule and all dosages of vaccines administered may be kept. This record has been approved by the Massachusetts Medical Society and the Massachusetts Department of Education for use as an official record of each child's immunization status when entries into the record are signed by a health care provider. Health care providers give parents the Blue Books with instructions to bring the record with them to all pediatric visits. Parents are also told that this record is required for entry into day care, kindergarten, and college.

The Blue Books have been revised to include the four-dose *Haemophilus influenzae* type B and three-dose hepatitis B schedules. The Blue Books are now provided to all maternity hospitals in the state for documentation of administration of the first dose of hepatitis B vaccine to newborn infants. In addition, an MDPH certificate of immunization that can be given to students or used as part of their record is available from any regional MIP Epidemiologist.



INFECTIOUS DISEASES

The diseases to be discussed in this chapter are divided into 8 categories. Within each category, the following diseases are presented:

1. Vaccine-preventable diseases

- Hemophilus influenzae type B (Hib), (p. 8–5)
- Measles, (p. 8–8)
- Mumps, (p. 8–9)
- Rubella, (p. 8–10)
- Polio, (p. 8–12)
- Diphtheria, (p. 8–12)
- Tetanus, (p. 8–13)
- Pertussis (Whooping Cough), (p. 8–14)
- Hepatitis B (discussed in section on Diseases Spread Through Blood Contact)

2. Disease spread through the intestinal tract (via stool)

Infectious Diarrheal Diseases

- Giardia, (p. 8–17)
- Shigella, (p. 8–18)
- Salmonella, (p. 8–19)
- Campylobacter, (p. 8–20)

Other Intestinal Tract Diseases

- Pinworms, (p. 8–21)
- Hepatitis A, (p. 8–22)
- Hand, Foot, and Mouth Syndrome (Coxsackievirus), (p. 8–24)

3. Diseases spread through the respiratory tract (via fluids from eyes, nose, mouth, and lung)

Common Illnesses

- Respiratory Viral Illnesses (Colds, Influenza), (p. 8–25)
- Roseola, (p. 8–26)
- Group A Streptococcal Infections (Strep Throat, Scarlet Fever), (p. 8–26)
- Chickenpox (and Shingles), (p. 8–28)
- Fifth Disease (Erythema Infectiosum), (p. 8–30)

Serious Illnesses

- Meningococcal Illness, (p. 8–31)
- Tuberculosis (TB), (p. 8–33)



4. Diseases spread through direct contact (via touching)

Superficial Infections/Skin Infections

- Impetigo, (p. 8–36)
- Ringworm (Tinea), (p. 8–38)
- Conjunctivitis (Pink Eye), (p. 8–38)
- Scabies, (p. 8–39)
- Pediculosis (Head Lice), (p. 8–41)

Generalized Infections and Systemic Infections

- Cytomegalovirus (CMV) Infection, (p. 8–44)
- Herpes Simplex Infection, (p. 8–45)
- Infectious Mononucleosis, (p. 8–46)
- Sexually Transmitted Diseases, (p. 8–47)

5. Diseases spread through blood contact

- Hepatitis B, (p. 8–50)
- HIV Infection and AIDS, (p. 8–54)

6. Non-contagious infectious diseases

- Otitis Media (Middle Ear Infection), (p. 8–61)

7. Diseases spread from animals to people

- Rabies, (p. 8–62)
- Tickborne Diseases, (p. 8–64)

8. Sports-related infectious diseases, (p.8–66)

VACCINE-PREVENTABLE DISEASES

Vaccine-preventable diseases are a group of diseases that include measles, mumps, rubella, polio, pertussis, diphtheria, tetanus, Hib, and hepatitis B. Prior to the implementation of immunization programs, these diseases were a major cause of widespread illness, often leading to permanent medical complications or even death. These diseases caused problems especially in children, although adults were also affected. Recently, new vaccines have been licensed to prevent *Haemophilus influenzae* type B infections and hepatitis B.

Some people believe that these diseases are no longer a problem in the United States or that children cannot get them anymore. This is not true; cases of these diseases still occur, particularly in unimmunized or inadequately immunized children and adults. In recent years, over 400 cases of these diseases were reported annually in Massachusetts. Incidence of many of these diseases is on the rise.

Children in schools and school staff are especially at risk. Schools that have a relatively young staff (born after the late 1950's and



early 1960's) are at particular risk because they are too young to have gotten natural immunity from disease during the days before widespread vaccination, and they graduated from high school before vaccination for all these diseases was required. In addition, protection against pertussis (whooping cough) decreases over time and is non-existent 12 years after the last dose which is usually given between the ages of 2 months and 7 years of age. Many outbreaks of pertussis have recently occurred.

Children should be immunized as completely as possible for their age, in accordance with regulations. Exhibit 8-2 is a schedule of required immunizations. The Massachusetts immunization requirements also apply to student visitors from other states and nations. All adults working in schools (including volunteers) should have immunity to measles, mumps, rubella, tetanus, and diphtheria. Acceptable evidence of immunity in adults can be provided in several ways, which vary by the age of the adult and the specific disease (Exhibit 8-3).

If a documented case of measles, mumps, rubella, polio, diphtheria, tetanus, pertussis, Hib, or hepatitis B occurs in the school, the local board of health and regional immunization epidemiologist must be notified (105 CMR 300.000). They will assist in starting any necessary identification and vaccination of susceptible children and adults, and provide instruction on procedures for closely monitoring the school for additional cases and for notifying parents. Exhibit 8-4 outlines investigative measures for vaccine-preventable diseases developed by MDPH Division of Epidemiology and Immunization.

Haemophilus Influenzae Type B Illness (Hib Disease)

Haemophilus influenzae type B (Hib) causes serious, and sometimes fatal, illnesses, most often in young children. Some of the diseases it can cause are:

- Meningitis — infection of the coverings of the brain.
- Epiglottitis — infection of the upper throat and entrance to the windpipe.
- Cellulitis, infection of the deep skin, especially of the face and neck.
- Arthritis, infection, and swelling of the joints.
- Pneumonia or infection of the lung.
- Bloodstream infections.

Transmission: These illnesses are primarily seen in children under 5 years of age. Epiglottitis occurs most commonly in children 3 to 5 years old, and the other diseases are most common in children under 2 years. Children in a group care setting are at a greater risk of catching these illnesses than others. Older children and adults rarely develop these illnesses; however, they can be carriers and transmit them to younger individuals.

As with meningococcal infections, Hib disease requires relatively close contact to spread from person to person. Spread is more likely among children under age 4 years, with the highest risk in



children under age 2. It appears that in a household or group care center where there are young children and everyone is in close contact, there is an increased risk of a second infection following a first case.

The bacteria are passed from person to person by breathing in infected droplets of nose or throat fluids scattered in the air, through direct contact (e.g., kissing) with infected fluids, or by sharing eating utensils, drinking cups, straws, etc. They can also be passed if infected secretions are touched by people who then put their hands in their mouth, nose, or eyes. The bacteria do not live on environmental surfaces.

Like meningococcus, some people can carry these bacteria in their nose or throat for a period of time without symptoms of illness. However, a carrier still may spread the bacteria to another person, who may then become ill. In a household or classroom in which an Hib infection has occurred, the number of individuals with nose or throat carriage is greatly increased; thus, risk of serious disease is also increased.

Diagnosis: These illnesses are diagnosed by culturing an infected person's blood, spinal fluid, or other infected fluid. It may take up to 72 hours to grow and identify the bacteria. Sometimes a doctor can make an early diagnosis by looking at the infected fluid under the microscope.

Treatment: People sick with these infections generally require hospitalization for treatment. The carriage of these bacteria in the nose and throat of healthy children and adults may be reduced and perhaps eliminated when a person takes the medicine rifampin by mouth. In order to reduce the risk of spread within a household, both the sick person and other people living in the same house should take this medicine. Rifampin is an antibiotic that is used as a preventive treatment in the preschool and any day care environment or among household contacts. Rifampin treatment can also be considered for contacts in the kindergarten setting. Preventive treatment is *not* generally recommended in schools where all individuals are 5 years of age or older.

Careful observation of child care Hib disease contact is essential. Children who develop illnesses with fever should receive prompt medical evaluation. When there is exposure to a child with Hib infection in a group of children less than 2 years of age and the group members are in close contact for 24 or more hours a week (thus like household contact), rifampin treatment should be given to children and staff regardless of immunization status. Rifampin treatment is not required if there is only one case in a child care program and if all contacts are older than 2 years.

When two or more cases of serious Hib disease have occurred among children from any age group within a 60-day period, an antibiotic such as rifampin is indicated for all children (regardless of age or immunization status) and staff. Children enrolled within 1 week of the last case should also receive rifampin. When rifampin treatment is used, *all children enrolled*, regardless of age or Hib immunization status, should receive treatment. In multi-classroom settings, only classroom contacts need rifampin. Because therapy



for systemic Hib disease does not prevent people from carrying Hib bacteria in their nose or throats, a child treated for Hib disease should be given rifampin treatment before returning to the child care program.

A recently licensed vaccine to prevent Hib infections is now required for children beginning at 2 months of age. The vaccine takes several doses to provide some protection. *Although it is very effective, not even four doses are 100% protective.* In addition, it does not prevent a child from becoming a carrier. Therefore, even immunized children need to take antibiotics as prescribed by their licensed provider.

School attendance guidelines: Children and staff who are not ill with Hib disease may return as soon as rifampin has begun. Children or staff who are ill should be excluded while they are ill and until they have taken rifampin for 4 days. Exclude any children who do not receive rifampin for 1 week after onset of the last case. Children with Hib illness should not return until they are well and after they have finished taking rifampin for 4 days.

The school physician and school nurse, collaborating with the local health department and/or the MIP at MDPH, should decide when children and staff should be required to take rifampin or other prescribed antibiotic after one case or after two cases of Hib disease occur in the school.

Reporting requirements: A case of *Haemophilus influenzae* must be reported to the local board of health immediately. The MIP epidemiologist should also be notified for assistance in infection control.

Notification guidelines: When Hib occurs within the school population, the school nurse and school physician, consulting with the MIP and the local board of health and the MIP epidemiologist, shall determine whether some or all parents and staff should be notified immediately so that they may contact their health care providers. Prior to parent notification, it should be discussed with the school administrator. (See Exhibit 8-5 for a sample letter to parents about Hib Disease. Exhibit 8-6 is a sample letter to parents of close contacts.)

Stop-Spread Guidelines

- Develop a system for responding to a case of Hib disease.
- Develop a policy regarding the use of rifampin or other prescribed antibiotic. (Children less than 2 years old are at greatest risk of catching serious Hib illness.)
- Notify the local board of health.
- Inform parents and staff that rifampin does not give 100% protection against disease. Therefore, any child or adult who becomes ill with fever, headache, or stiff neck should be seen promptly by a health care provider.
- Monitor the situation closely for 2–3 weeks. Make sure all ill children, particularly those with fever, headache, stiff neck, and other



symptoms associated with the illness, are seen by their doctor and that the school is notified if another person develops Hib infection. The time of greatest risk of others becoming ill is the first week following the first case, but some risk exists for up to 2 months.

- Require all attending children to be appropriately immunized with Hib vaccine.
- Notify parents of any new child enrolled in the school within 2 months of the last case.
- More detailed information about the control of Hib disease in the class, grade, extracurricular groups, or schoolwide can be found in the MDPH document *Guidelines for the Control of Vaccine-Preventable Diseases*, which is available from the local board of health or regional MIP epidemiologist.

Measles

Measles is the most communicable viral illness and one of the most serious of the common childhood diseases. Usually it causes a brownish-red blotchy rash, which begins on the face and spreads down the body over 3 days, accompanied by high fever, cough, runny nose, and watery eyes. The illness lasts 1 to 2 weeks and can be complicated by ear infections, pneumonia, or encephalitis (inflammation of the brain). It can also cause miscarriages or premature delivery in pregnant women. *There has been a sharp rise in the number of cases of measles in the United States.*

Transmission: All people are at risk for measles, but those most at risk are generally limited to four groups: (1) children less than 15 months of age (those who are too young to have been immunized), (2) unimmunized preschoolers, (3) those refusing vaccination, and (4) adolescents and young adults who may have received an earlier ineffective measles vaccine prior to 1968 or who are unimmunized because they graduated from school prior to mandatory measles vaccination. Adults born prior to 1957 are generally considered immune. In Massachusetts, a large proportion of cases are seen in adolescents and young adults. The groups most at risk for complications are infants less than 12 months of age, pregnant women, and individuals with weakened immune systems.

Measles is spread by large, infected droplets or direct contact with the nasal or throat fluids of infected individuals. It is also airborne and can be spread by inhaling air that has tiny infectious droplets from sneezes and coughs. Measles can be acquired by entering a room where an infectious individual has been for up to 1½ hours *after* that person has left the room. The communicable period is greatest *4 days before and 4 days after* rash onset. The incidence of measles is rising; therefore, immunization schedules have been changed to include two doses.

Diagnosis: Illness can be presumptively diagnosed by the signs and symptoms; however, a blood test, to look for antibodies that are evidence of recent infection, is required in order to confirm a preliminary diagnosis of measles.

School attendance guidelines: A student or staff member with measles should not return until at least 4 days after the appearance of the rash. If there is one case of measles, susceptibles must be excluded from days 5 through 18 after exposure to the case during its infectious period. After exposure, "susceptible" means all those born after 1956 without documentation of at least two doses of vaccine, with the *second* dose having been administered within 72 hours of exposure. Immunization within this time period often prevents disease. If there are multiple cases, exclude all susceptible children and adults for 14 days after exposure to the last case during its infectious period or after the date of rash onset of the last case.

Measles is one of the few diseases that *can* be prevented through prompt immunization after exposure. If a case is reported or suspected, all susceptible students and staff who are without contraindication to vaccine should be immunized *within 72 hours* of exposure. In order to identify those exposed, think in terms of the zones of exposure described in Exhibit 8-4. Also refer to Exhibit 8-2 and 8-3 for acceptable evidence of immunity.

Immune globulin (IG), if given within 6 days of exposure, may decrease the severity of illness and should be offered to all those under 12 months of age, pregnant women, individuals who have weakened immune systems, or those with other contraindications to the vaccine. *Those who receive IG can still become infectious and should be excluded for 14 days after their exposure.*

Reporting requirements: A case of *Measles* must be reported immediately to the local board of health. The regional MIP epidemiologist should also be notified to assist in infection control.

Notification guidelines: When measles occurs within the school population, the school nurse and school physician, collaborating with the local board of health and the MIP epidemiologist, should determine whether some or all parents and staff should be notified immediately. Prior to parent notification, it should be discussed with the school administrator.

The epidemiologist can also help develop appropriate letters to be sent to parents and staff. More detailed information about the control of measles in the class, grade, extracurricular groups, or schoolwide can be found in the MDPH document *Guidelines for the Control of Vaccine-Preventable Diseases*, which is available from any local board of health or regional MIP epidemiologist.

Mumps

Mumps is a viral infection that causes fever, headache, and swelling and tenderness of the salivary glands, particularly the gland at the angle of the jaw, causing the cheeks to swell. Possible complications include meningitis (inflammation of the coverings of the brain and spinal cord), encephalitis (inflammation of the brain), deafness, and, particularly in adolescent or adult males, inflammation of the testicles. The virus may produce a miscarriage if a woman becomes infected during the first trimester of pregnancy. The incidence of mumps is rising.



Transmission: Most adults born before 1957 have been infected naturally and are probably immune. Mumps may be seen in unimmunized children or adolescents and young adults who graduated from school prior to laws requiring mumps immunizations or may have received an earlier, less effective vaccine. At risk for complications are children under the age of 12 months, pregnant women, persons who have weakened immune systems, and susceptible adolescent and adult males.

The mumps virus is found most often in saliva. It is transmitted by direct contact or by droplet spread of the virus in the air through sneezes or coughs. The virus may also be found in urine. Mumps is most infectious 48 hours *prior* to the onset of symptoms and may be communicable as long as 6 days before swelling to 9 days after swelling.

Diagnosis: The illness can be presumptively diagnosed by the signs and symptoms. However, it *must* be confirmed by a blood test to look for antibodies that are evidence of recent infection.

School attendance guidelines: Exclude a student or staff member until 9 days after the onset of swelling, or until the swelling has subsided (whichever is sooner). In order to identify those exposed, think in terms of the zones of exposure described in Exhibit 8-4 and to evidence of immunity in Exhibits 8-2 and 8-3. All individuals who are susceptible (those born after 1956 without written documentation of immunization or serologic evidence of immunity) should be immunized. However, unlike measles, prompt immunization after exposure will not prevent disease. If there is only one case of mumps, all susceptibles, including those just immunized, should be excluded from days 12 through 26 after exposure to the case during its infectious period. If multiple cases occur, susceptibles must be excluded for 21 days after the last case.

Reporting requirements: A case of mumps must be reported immediately to the local board of health. The regional MIP epidemiologist should also be notified to assist in infection control.

Notification guidelines: When mumps occurs within the school population, the school nurse and school physician, collaborating with the local board of health and the MIP epidemiologist, should determine whether some or all parents and staff should be notified immediately. Prior to parent notification, it should be discussed with the school administrator.

The epidemiologist can also help to develop appropriate letters to be sent to parents and staff. More detailed information about the control of mumps can be found in the MDPH document *Guidelines for the Control of Vaccine-Preventable Diseases*, which is available from any local board of health or regional MIP epidemiologist.

Rubella

Rubella (also called German measles) is a viral illness that is usually very mild and causes a slight fever and a flat, red rash that often begins on the face. Over 24 hours, the rash rapidly generalizes to the rest of the body. There is swelling of the glands of the neck, in particular, the glands on the back of the neck. The illness



lasts about 3 days. Adolescent and adult women may have swelling and aching of the joints for about a week or so. Rarely, encephalitis (inflammation of the brain) or a temporary bleeding disorder (purpura) can occur, more commonly in adults. As many as half of the infections may occur without rash.

The most serious problem with rubella is that if a pregnant woman becomes infected, the developing infant can become infected. Stillbirth or miscarriage can occur, or serious birth defects such as heart defects, deafness, blindness, or mental retardation can occur in the infant. This group of problems in infants born to infected women is called congenital rubella syndrome (CRS). Over the past few years, its incidence has increased in the United States.

Transmission: Approximately 15 to 25% of young adults remain susceptible to rubella due to lack of proper immunization. Rubella is most often seen in unimmunized children and in a susceptible adolescent and young adult group that graduated prior to enactment of rubella vaccination laws and regulations. Those at risk for complications include individuals with weakened immune systems and *susceptible women of childbearing age due to risk of CRS.*

The virus is spread by large droplets spread through the air by a sneeze, a cough, or by direct contact with infected nasal or saliva secretions.

Diagnosis: The illness can be presumptively diagnosed by the signs and symptoms. However, it *must* be confirmed by a blood test to look for antibodies that are evidence of recent infection.

School attendance guidelines: A student or staff member with rubella may return 7 days after the onset of the rash. In order to identify those exposed, think in terms of the zones of exposure described in Exhibit 8-4. See Exhibits 8-2 and 8-3 for evidence of immunity. All individuals who are susceptible (those without written documentation of immunization or serologic evidence of immunity) should be immunized. However, unlike measles, prompt immunization after exposure to rubella will *not* prevent disease. If only one case of rubella occurs, susceptibles, including those just immunized, must be excluded from days 7 through 21 after exposure to the case during its infectious period. If there are multiple cases, susceptibles must be excluded for 21 days after exposure to the infectious case. Unimmunized persons must also be excluded until 21 days after the date of rash onset in the last case.

Reporting requirements: A case of rubella must be reported immediately to the local board of health. The regional MIP epidemiologist should also be notified to assist in infection control.

Notification guidelines: When rubella occurs within the school population, the school nurse and school physician, collaborating with the local board of health and the MIP epidemiologist, should determine whether some or all parents and staff should be notified immediately. Prior to parent notification, it should be discussed with the school administrator.

The epidemiologist may also help to develop appropriate letters to be sent to parents and staff. More detailed information about the

control of rubella can be found in the MDPH document *Guidelines for the Control of Vaccine-Preventable Diseases* which is available from any local board of health or regional MIP epidemiologist.

Polio

Polio is an illness caused by a virus. It ranges in severity from a mild, unnoticed febrile illness to meningitis (inflammation of the covering of the brain and spinal cord) to paralysis or even death.

Transmission: Today, polio cases occur mainly among unimmunized individuals or those with weakened immune systems in contact with another individual who is receiving oral polio vaccine. It also occurs among unimmunized persons and members of groups that refuse immunization after traveling in countries where polio is still common.

The virus is spread by eating food or drinking water contaminated by the virus and direct contact with infected stool and throat secretions (phlegm, mucus). Persons are most infectious during the first few days before and after the onset of symptoms. However, the virus can be shed in the stool for up to 8 weeks.

School attendance guidelines: Individuals with polio are infectious for up to 8 weeks. Those with weakened immune systems may excrete the virus for a longer period. Due to the seriousness of this disease, it is unlikely they will return before then. Persons exposed to polio should get a booster if it has been 10 years since their last dose of live oral poliovirus vaccine (OPV) or enhanced inactivated polio vaccine (EIPV) or 5 years since their last dose of inactivated poliovirus vaccine (IPV). If they have never been immunized, a vaccination series should be initiated.

Reporting requirements: A case of polio must be reported immediately to the local board of health. The regional MIP epidemiologist should also be notified to assist in infection control.

Notification guidelines: When polio occurs within the school population, the school nurse and school physician, collaborating with the local board of health and the MIP epidemiologist, should determine whether some or all parents and staff should be notified immediately. The epidemiologist may also help to develop appropriate letters to be sent to parents and staff. Prior to parent notification, it should be discussed with the school administrator.

Diphtheria

Diphtheria is a very serious bacterial infection of the nose and throat. It causes a sore throat, swollen tonsils with a grayish covering, and swollen neck glands. It can lead to severe throat swelling that can block breathing. The bacteria also produces a toxin (a type of poisonous substance) that can cause severe and permanent damage to the nervous system and heart. Diphtheria is treated primarily with an antitoxin, along with antibiotics. Antibiotics are also given to the carriers of the diphtheria bacteria.

Transmission: Diphtheria occurs primarily among unimmunized or inadequately immunized people. Some studies have shown that 40–60% of young adults are susceptible. Booster doses of diphtheria



toxoid, every 10 years after finishing the childhood primary immunization series, are needed to maintain protection.

The bacteria are spread by direct contact with discharge from the nose, throat, skin, eyes, or sores of infected persons. Articles of food contaminated with discharge can also spread infection.

School attendance guidelines: Patients and carriers of the diphtheria bacteria should receive appropriate treatment, including immunization, and not return until two cultures, taken 48 hours apart, from nose, throat, or skin sores, are negative for the bacteria; cultures should be taken at least 48 hours after finishing treatment.

In order to identify those exposed, think in terms of the zones of exposure described earlier in Exhibit 8-4. Also refer to Exhibits 8-2 and 8-3 for evidence of immunity. These individuals will require antibiotic treatment and immunization and should be excluded until cultures are negative.

Reporting requirements: A case of diphtheria must be reported immediately to the local board of health. The regional MIP epidemiologist should also be notified to assist in control measures.

Notification guidelines: When diphtheria occurs within the school population, the school nurse and school physician, collaborating with the local board of health and the MIP epidemiologist, should determine whether some or all parents and staff should be notified immediately. The epidemiologist can also help to develop appropriate letters to be sent to parents and staff. Prior to parent notification, it should be discussed with the school administrator.

Tetanus

Tetanus bacteria that live in soil can enter the body through a cut or wound, producing a poisonous substance that causes the muscles to go into spasms. Paralysis and even death can result. Tetanus sometimes is called lockjaw.

Transmission: Tetanus occurs almost exclusively in unimmunized or inadequately immunized persons. Some studies have shown that 10% of young adults are susceptible. Booster doses of tetanus toxoid every 10 years after finishing the childhood primary immunization series are necessary to maintain protection. Unlike the other vaccine-preventable diseases, tetanus is *not* spread from person to person. It occurs when the bacteria in soil or dust are introduced into the body through a wound. Make sure all cuts, scrapes, and puncture wounds are cleaned well with soap and water; individuals who have sustained deep or severe wounds should be referred to medical attention. Older individuals who may not be up-to-date on their immunizations should consult with their physician about treatment.

School attendance guidelines: Students and staff should stay home until they feel well.

Reporting requirements: A case of tetanus must be reported immediately to the local board of health. The regional MIP epidemiologist should also be notified.



Notification guidelines: Even though tetanus is not spread person-to-person, if a case occurs, officials may want to use this as an opportunity to remind others to check their immunization records and get boosters if necessary. When tetanus occurs within the school population, the school nurse and school physician, collaborating with the local board of health and the MIP epidemiologist, should determine whether some or all parents and staff should be notified. The epidemiologist can also help to develop appropriate letters to be sent to parents and staff. Prior to parent notification, it should be discussed with the school administrator.

Pertussis (Whooping Cough)

Pertussis is a very contagious bacterial infection of the respiratory tract. The disease begins with cold symptoms, and over 1 to 2 weeks develops into repeated attacks of severe coughing which can last 1 to 2 months. The classic “whoop” sound (which gets its name from the sound a person makes when she or he tries to draw a breath after a coughing spell) may not occur, especially in young infants, adolescents, and adults. During the severe coughing stage, seizures or even death can occur, particularly in young infants, due to lack of oxygen supply. In school-aged children and adults, pertussis is less serious and resembles chronic bronchitis. The whoop is usually absent. The cough may be worse at night or may be associated with paroxysms or vomiting after coughing.

Antibiotic treatment will reduce the infectiousness of an ill person but may not improve symptoms once a person has developed a severe cough. However, antibiotics are crucial in making people noninfectious and preventing illness in contacts.

Transmission: Pertussis cases reported in Massachusetts rose from 20 in 1984 to more than 400 in 1993. Incidence among infants 1 to 12 months of age has also increased. Peak rates occur in the summer months in this age group. Many of the infants have not received immunizations. Their source of infection is usually adults or teens with prolonged cough illness (without “whoop”) misdiagnosed as bronchitis. Protection from this vaccine wears off and is absent 12 years after the last dose is given between the ages of 4 and 7. *Due to this waning immunity, the incidence of pertussis in 10 to 19 year olds has increased alarmingly and now accounts for most of the cases in Massachusetts.* Peak rates occur in the fall and winter months in this age group. Outbreaks in middle schools and junior and senior high schools are common in Massachusetts. Currently, there is no pertussis vaccine licensed for use in older individuals. Outbreaks will continue until such a vaccine is introduced.

The bacteria are spread by direct contact with discharge from the nose or throat of an infected person or by breathing in infected droplets in the air where an infected person coughs. The period of greatest risk of spread is the early “cold” stages and during the first 1 to 2 weeks of the “cough” stage.

Diagnosis: The illness can be presumptively diagnosed by signs and symptoms. It should be confirmed by a culture or special smear taken from the back of the person’s nose or by a blood test.

School attendance guidelines: In order to identify those exposed, think in terms of the zones of exposure described in Exhibit 8-4. Also refer to Exhibits 8-2 and 8-3 for evidence of immunity. Exclude a student or staff member until 3 weeks after the onset of cough or 5 days after starting appropriate antibiotic therapy. Make sure that individuals who have direct contact with a case of pertussis receive antibiotic treatment to prevent the development or spread of the disease. Exclude anyone who refuses antibiotics for 21 days after exposure or 21 days after the last case has been reported.

Reporting requirements: A case of pertussis must be reported immediately to the local board of health. The regional MIP epidemiologist should also be notified to assist in control measures.

Notification guidelines: When pertussis occurs within the school population, the school nurse and school physician, collaborating with the local board of health and the MIP epidemiologist, should determine whether some or all parents and staff should be notified immediately. Prior to parent notification, it should be discussed with the school administrator.

The epidemiologist may also help to develop appropriate letters to be sent to parents and staff. More detailed information about the control of pertussis can be found in the MDPH document *Guidelines for the Control of Vaccine-Preventable Diseases*, which is available from any local board of health or regional MIP epidemiologist.

Hepatitis B

See section later in this chapter on Diseases Spread Through Blood Contact

DISEASES SPREAD THROUGH THE INTESTINAL TRACT

Diseases that are caused by organisms (viruses, bacteria, or parasites) that multiply in the intestines and are passed out of the body in the stool can be caught by anyone, and they can be caught repeatedly (except for hepatitis A). Should stool containing these organisms get on hands or objects, it can inadvertently be ingested. Swallowing as few as 10 *Shigella* or *Giardia* organisms may cause an intestinal tract illness. *Salmonella* and *Campylobacter* organisms must be ingested in larger quantities to cause illness.

Students or staff who have hand-stool contact may facilitate transmission. Students or staff with disease-causing organisms in their stool may not act or feel sick or have diarrhea. Laboratory tests are the only means of confirming the presence of this organism in a particular stool, and may be performed as part of an effort to control an outbreak of disease.

When cases of infectious diarrhea, pinworm, or hepatitis A are diagnosed among students or staff, the school nurse and school physician should determine, based on their medical judgement, whether some or all of the parents and staff should be notified. Notification should always be discussed with the school administrator. (See Exhibit 8-7 for a sample letter to parents about diarrheal diseases.) *Fact sheets are available from MDPH for each individual illness and*



should accompany this notification. In addition, both infectious diarrhea and hepatitis A should be reported to the local board of health.

Because students and staff who have intestinal tract diseases do not always feel sick or have diarrhea, the best method for preventing spread of disease is to have a constant prevention program in place. *In the school setting the best prevention program is to promote hand washing after using the bathroom and before preparing or eating food. In addition, it is important to ensure that bathrooms have an adequate supply of soap (preferably liquid), running water, paper towels, and toilet paper.*

Infectious Diarrheal Diseases: *Giardia*, *Shigella*, *Salmonella*, and *Campylobacter*

People have diarrhea when they have more stools than normal for them and the stools are loose, watery, and unformed.

Infectious diarrhea is caused by viruses, parasites, or bacteria and can be spread quickly from person to person. *Non-infectious* diarrhea can be caused by toxins (e.g., certain types of food poisoning), chronic disease (e.g., cystic fibrosis), or antibiotics (e.g., ampicillin) and does not spread from person to person.

This section gives detailed information on infectious diarrhea caused by *Giardia*, *Shigella*, *Salmonella*, and *Campylobacter*. Other infectious diarrheal agents, including parasites (e.g., cryptosporidium, amoeba), other bacteria (e.g., *Yersinia*, *E. coli* 0157:H7), and other viruses (e.g., Rotavirus) are not discussed in detail, but the general “stop-spread” instructions in this section apply to all these diseases.

School Attendance Guidelines

- When students or staff have uncontrolled diarrhea and fever or vomiting (or have severe or bloody diarrhea), or if diarrhea cannot be contained by diapers (in those students using them), exclude them until fever and diarrhea are gone and the individuals have been treated if necessary.
- When students or staff have mild diarrhea but are not sick, take special precautions or exclude.
- When students or staff who do not prepare food or feed students are found to have infectious diarrheal germs in their stool (positive stool cultures) but have no diarrhea or illness symptoms, take special precautions but do not exclude them. (Also make sure they receive appropriate management.) During outbreaks a negative stool culture may be required.
- When staff who normally prepare food or feed children have positive stool cultures, do not permit them to prepare food or feed students until they have one negative stool culture taken 48 hours after medication is completed, if antibiotics are used. During outbreaks, two consecutive negative stool cultures may be required (105 CMR 300.000).

Return Guidelines

- Excluded students and staff may come back to school after treatment and when severe diarrhea is gone. During outbreaks, negative stool cultures may be required for students and staff.



To Stop Spread of Infectious Diarrheal Diseases

- Strictly enforce all hand washing, using the bathroom, diapering, and cleanliness procedures.
- Attention to environmental cleaning and sanitation.
- Keep track of the number of cases of diarrhea.
- If there is an increase in the number of cases expected in the school, call the local board of health and take the following *additional precautions*:

Additional Precautionary Measures

- Instruct students and staff *not to share food, drink, or eating/drinking utensils*.
- Monitor enforced hand washing for students and staff. Everyone should wash his or her hands upon arrival at school, after using the bathroom, before eating or preparing food, or after contact with other body fluids.
- Staff, including volunteers, should take care to wash hands upon arrival, after using the bathroom themselves or toileting a child, before eating or preparing food, before feeding a child, or after contact with other body fluids. *A hand-washing checklist is available from MDPH for use during outbreaks.*
- Monitor bathrooms daily to ensure an adequate supply of soap (preferably liquid), running water, paper towels, and toilet paper. Bathrooms should be thoroughly cleaned and sanitized daily, or more often if indicated. A bathroom checklist and hand washing poster is available from MDPH for use during outbreaks. Hand-washing posters should be prominently displayed by all sinks available for that purpose.
- Give attention to environmental cleaning and sanitation in all settings.
- Symptomatic students and non-food-handling staff may be required by state or local public health officials to submit a negative stool culture before returning to school. Depending on the circumstances, asymptomatic food-handling staff may be required to submit one or two negative stools; and symptomatic food handlers submit two negative stools in order to return to food-handling duties.

Giardia

Giardia is an intestinal parasite in the small bowel that may cause chronic diarrhea, stomach cramping, bloating, pale and foul-smelling stools, weight loss, and fatigue. Even when asymptomatic, many people who have *Giardia* still pass *Giardia* cysts in their stools and are infectious if untreated.

Transmission: *Giardia* is very common; between 1% and 20% of all people have it at any given time. It spreads quickly in environments or settings where individuals are not continent of stool or where surfaces have been contaminated by stool. Microscopic *Giardia*



cysts are spread by contact with stool, drinking untreated water, and sometimes by drinking water in areas where the water supplies are contaminated. Cysts can be shed in stool for many weeks, and people are infectious as long as they are excreting cysts.

Diagnosis: Stool must be examined under a microscope to identify *Giardia* cysts. Because *Giardia* is present in stools only sporadically, several examinations over time are required.

Treatment: Individuals with *Giardia* who are ill and/or have diarrhea should receive medication. Infected individuals who do not have symptoms should not be treated routinely. Although there is no medical consensus regarding treatment for asymptomatic *Giardia* infection, treatment of asymptomatic infection should be considered based on the potential for transmission or reinfection.

School attendance guidelines: See school attendance and return guidelines on page 8-16.

Reporting requirements: A case of *Giardia* must be reported to the local board of health.

Notification guidelines: When a case of *Giardia* occurs in the school population, the school nurse and school physician should determine, based on their medical judgement, whether some or all parents and staff should be notified. When necessary they may consult with MDPH. Prior to parent notification, it should be discussed with the school administrator. (See Exhibit 8-7 for a sample Letter to parents about Diarrheal Diseases.) *Fact Sheets are available from MDPH and should accompany this notification.*

Inform family and household members in contact with a person with *Giardia* diarrhea of their possible exposure to this parasite, especially if they are involved in food handling or preparation. If they develop diarrhea, they should immediately see their health care provider and get a stool test.

Stop-Spread Guidelines

Careful attention to good hygiene, handwashing, and environmental cleaning and sanitation is very important in reducing spread. For additional guidelines, refer to page 8-17.

Shigella

Shigella is a family of bacteria that causes symptoms ranging from mild diarrhea to diarrhea with blood and mucus. In severe cases, it can cause dehydration, fever, severe cramps, vomiting, headache, and even convulsions (in young children). Illness generally begins 1 to 4 days after ingesting the bacteria. Although symptoms usually disappear even without treatment after 4 to 7 days, bacteria may still be passed out in the stool for several more weeks.

Transmission: *Shigella* is most common in children younger than age 5 years and can be a significant problem in other close groups or in settings where individuals are not continent of stool. It is transmitted when diarrheal stool gets on hands or objects and is spread to others' hands or mouths. It can also be spread through stool-contaminated food, drink, or water. As few as ten bacteria can

cause ingested *Shigella* infection. People with this illness are infectious until the bacteria are no longer present in their stool.

Diagnosis: A stool culture must be performed. Up to 72 hours may be required to grow the bacteria from a stool sample.

Treatment: Children and adults who have *Shigella* in their stool are usually given antibiotic medication that shortens both duration of the illness and length of time that bacteria are passed with stool.

School attendance guidelines: See school attendance and return guidelines for infectious diarrhea on page 8-16.

Reporting requirements: A case of *Shigella* must be reported to the local board of health.

Notification guidelines: When *Shigella* occurs in the school population, the school nurse and school physician should determine, based on their medical judgement, whether some or all parents and staff should be notified. When necessary they may consult with the Massachusetts Department of Public Health. Prior to parent notification, it should be discussed with the school administrator.

Family and household members in contact with a person with *Shigella* diarrhea should be informed of possible exposure to the bacteria, especially if they are involved in food handling or preparation. If they develop diarrhea, they should immediately see their health care provider and get a stool culture. (See Exhibit 8-7 for a sample letter to parents about Diarrheal Diseases.) *Fact sheets are available from MDPH and should accompany this notification.*

Additional necessary measures during outbreaks: Careful attention to good hygiene, handwashing, environmental cleaning and sanitation is very important in reducing spread. Since *Shigella* is very easily transmitted from person to person, staff and students should be instructed not to share food, drink, or eating utensils during an outbreak. It is essential to strictly follow the *Additional Precautionary Measures* outlined on page 8-17. Monitored, enforced hand washing and properly supplied hand washing facilities are essential in limiting the spread of infection

Salmonella

Salmonella is a family of bacteria that causes diarrhea accompanied by stomach cramps, pain, and fever. These symptoms usually develop in less than 24 hours after bacteria are ingested but may not develop until 72 hours and may disappear untreated in 2 to 5 days. Bacteria may be present in the stool for several weeks after the diarrhea is gone. Although rare, *Salmonella* may cause a bloodstream infection or infect a part of the body such as a joint. People who do not have diarrhea but are passing *Salmonella* bacteria in their stools are considered carriers of the infection.

Transmission: Anyone can get *Salmonella*, but children younger than age 5 years and adults older than age 70 get it most often. *Salmonella* can cause severe infections in those with underlying diseases, such as sickle cell anemia or cancer. *Salmonella* can be transmitted person to person via the fecal-oral route. *Salmonella* can be



shed in the stool for many weeks. Individuals with this illness are infectious until the bacteria is no longer present in their stool. A very large number of *Salmonella* bacteria must be ingested to cause illness.

Salmonella can also be spread by ingesting contaminated food or drink and is sometimes found on eggshells and in uncooked meat or poultry. Therefore, all foods — especially eggs, poultry products, and beef — must be cooked thoroughly, and any leftovers refrigerated. Do not use unpasteurized (raw) milk or raw eggs because they are frequently contaminated with *Salmonella* bacteria. Pet turtles and iguanas can be carriers of *Salmonella* as well.

Diagnosis: A stool culture must be performed. Up to 72 hours may be required to grow bacteria from a stool sample.

Treatment: Medication is not usually prescribed for *Salmonella*. In fact, medication can actually lengthen the time the bacteria is found in the stool.

School attendance guidelines: See school attendance and return guidelines for infectious diarrhea on pages 8-16.

Reporting requirements: A case of *Salmonella* must be reported to the local board of health.

Notification guidelines: When salmonella occurs within the school population, the school nurse and school physician should determine, based on their medical judgement, whether some or all parents and staff should be notified. When necessary they may consult with MDPH. Prior to parent notification, it should be discussed with the school administrator. (See Exhibit 8-7 for a sample letter to parents about Diarrheal Diseases.) *Fact sheets are available from MDPH and should accompany this notification.*

Make family and household members in contact with a person with *Salmonella* diarrhea aware of their possible exposure to the bacteria, especially if the people are involved in food handling or preparation. If they develop diarrhea, they should immediately see their health care provider and get a stool culture.

Individuals without symptoms do *not* need to be cultured except during outbreaks. Treatment with medication is not recommended for infected persons, those with mild diarrhea, or contacts with infected persons.

Stop-Spread Guidelines

Careful attention to good hygiene, handwashing, and environmental cleaning and sanitation is very important in reducing spread. For additional guidelines refer to page 8-17.

Campylobacter

Campylobacter is a family of bacteria that can cause diarrhea with fever, stomach cramps, and vomiting in adults and children. The diarrhea may be severe and bloody. *Campylobacter* infections occur 1 to 7 days after the bacteria are ingested. Usually symptoms disappear without treatment in 1 to 7 days, but there may still be bacteria in the stools for several weeks if treatment is not received.

Transmission: *Campylobacter* are spread stool to mouth. An individual must ingest a large number of these bacteria to become ill. The bacteria can also be spread through food (especially poorly cooked poultry products), unpasteurized milk, and contaminated water. When household pets such as dogs and cats have these bacteria in their stool, they may infect people. Infected individuals are contagious until the bacteria are no longer in their stool, but they are most contagious when they have acute symptoms.

Diagnosis: A stool culture must be performed. Up to 72 hours may be required for test results to be valid.

Treatment: Adults and students if diagnosed with *Campylobacter* in their stools may be treated with medication. This will reduce the chance of spread to others. Treatment with erythromycin or other prescribed antibiotic usually is effective within 2 or 3 days.

School attendance guidelines: See school attendance and return guidelines for infectious diarrhea on page 8-16.

Reporting requirements: A case of *Campylobacter* must be reported to the local board of health.

Notification guidelines: When *Campylobacter* occurs within the school population, the school nurse and school physician should determine, based on their medical judgement, whether some or all parents and staff should be notified. When necessary they may consult with MDPH. Prior to parent notification, it should be discussed with the school administrator. (See Exhibit 8-7 for a sample letter to parents about Diarrheal Diseases.) *Fact sheets are available from MDPH and should accompany this notification.*

Family and household members in contact with a person with *Campylobacter* diarrhea should be made aware of their possible exposure to the bacteria, especially if the individuals are involved in food handling or preparation. If they develop diarrhea, they should immediately see their health care provider and get a stool culture.

Stop-Spread Guidelines

Careful attention to good hygiene, handwashing, and environmental cleaning and sanitation is very important in reducing spread. For additional guidelines, refer to page 8-17.

Other Intestinal Tract Diseases

Pinworms

Pinworms are tiny worms that infect humans (but not animals) and live in the lower intestine. Female worms (resembling short, white threads less than $\frac{1}{2}$ inch long) come out through the anus at night and lay their microscopic eggs around the opening. In some cases, this causes intense itching. Contrary to commonly held beliefs, pinworms do not cause teeth grinding or bed-wetting and are not dangerous, just irritating.

Transmission: It is estimated that 5 to 15% of individuals in the United States have pinworms. Members of an infected person's household can be infected and reinfect a treated individual. When children or adults scratch their irritation, microscopic pinworm eggs may be



transferred to someone else's mouth or food via the fingers. Eggs may be ingested that will hatch into worms in the intestines. Individuals may be reinfected by ingesting eggs on their own hands. Pinworms can be indirectly spread through contact with clothing or bedding that has been contaminated with eggs. The period of infectivity lasts as long as eggs are being discharged around the anus. Eggs remain infective in an indoor environment for 2 to 3 weeks.

Diagnosis: The worms crawl out at night to lay their eggs while the child lies still and sleeps. The easiest way to find them is to inspect a 1 inch circular area around the child's anus about 1 hour after the child has gone to sleep. By spreading the buttocks and looking with a flashlight, a parent can see the worms crawling toward the opening of the anus. A health care provider can make the diagnosis by having the parent apply the sticky side of transparent tape around the anal area so eggs will stick to it. The best time is upon awakening in the morning, before bathing. The tape is then placed sticky side down on a slide and examined under a microscope.

Treatment: Several medications are available for treatment of this infection. Often the health care provider will treat the whole family if one person in the home is infected and may repeat treatment 2 weeks later.

School attendance guidelines: Students and adults do not need to be excluded from school.

Notification guidelines: When pinworm infection occurs within the school population, the school nurse and school physician should determine, based on their medical judgement, whether some or all parents and staff should be notified so they may watch for symptoms in themselves and/or their children. Prior to parent notification, it should be discussed with the school administrator. A sample letter to parents is available from MDPH.

Stop-Spread Guidelines

Follow hand washing and cleanliness procedures. Careful attention to good hygiene, handwashing, and environmental cleaning and sanitation is very important in reducing spread.

Hepatitis A

Hepatitis A is an infection of the liver caused by the hepatitis A virus. Although the virus causes a total body illness, it is spread through the intestines and stools. The illness often occurs from 2 to 8 weeks after the virus is ingested. Adults who have hepatitis A often suffer from fatigue, loss of appetite, nausea, abdominal pain, fever, and jaundice (yellowing of the skin and whites of the eyes, as well as dark brown urine and light colored stools). These symptoms usually last from 1 to 2 weeks, although some adults may be sick for several months. Most young children who catch the virus have only a mild flu-like illness without jaundice or have no symptoms at all.

Transmission: Anyone can get this infection which spreads quickly in groups of children who do not yet use the toilet and cannot wash their own hands well. Because most young children with *hepatitis A*

do not become ill, often the first sign of the infection is a jaundiced parent or staff member. Hepatitis A virus is passed out of the body in the stool and is spread by the stool-to-mouth method. It is found only briefly in the blood. Contact with stool-contaminated food, drink, or environmental surfaces can also spread the infection. A person is most contagious during the 2 weeks before the illness begins, when there are the most virus particles in the stool. Usually within a week after the illness starts, the virus disappears from the stool.

Diagnosis: Hepatitis A is diagnosed by a blood test that indicates if a person has ever had the infection, regardless of presence of symptoms.

Treatment: There is no treatment that cures hepatitis A. However, because the incubation period is so long, the illness can be made milder or prevented by giving persons a protective shot of immune globulin (IG) within 2 weeks of exposure to the virus.

School attendance guidelines: Children and adults with acute hepatitis A should be excluded from school for 1 week after the onset of the illness and until jaundice has disappeared.

Reporting requirements: A case of *Hepatitis A* must be reported to the local board of health, which will help investigate the possible outbreak and institute proper control measures.

Notification guidelines: When *Hepatitis A* occurs within the school population, the school nurse and school physician should determine, based on their medical judgement, whether some or all parents and staff should be notified. When necessary they may consult with MDPH. Prior to parent notification, it should be discussed with the school administrator. (See Exhibit 8-8 for a sample letter to parents about Hepatitis A.) *Fact Sheets* are available from the MDPH and should accompany this notification.

Stop-Spread Guidelines

Schoolroom exposure generally does not pose a significant risk of infection, and IG is not usually indicated. However, IG may be given to those who have close personal contact (e.g., sharing food or eating or drinking utensils) with infected individuals.

If a case of hepatitis A occurs in a kindergarten, first-grade, or pre-school class where hygiene may not be optimal or in a group of students who may not be continent of stool, more stringent control measures including the use of IG may be indicated. The local board of health can provide recommendations.

Food handlers must receive IG within 2 weeks of exposure or be excluded for 28 days from the day of the last possible exposure.

Other stop-spread guidelines include:

- Strictly enforce hand washing and cleanliness rules and ensure that all bathrooms are properly supplied with soap, paper towels, and toilet paper.



- Request that all parents and staff notify the school if any person in their household is diagnosed with hepatitis A.
- If a household member comes down with hepatitis A, all other members should contact their health care provider. An injection of IG is usually recommended.

Hand, Foot, and Mouth Syndrome (Coxsackievirus)

Hand, foot, and mouth syndrome is a mild disease caused by coxsackievirus. Symptoms may include fever, sore throat, stomach pain and diarrhea, and a rash of tiny blisters on the palms of the hands, soles of feet, and in the mouth. It is most common in the summer and fall.

Transmission: Adults and children can get it but it is most common among young children. Coxsackievirus is spread by stool to mouth. Stool gets on hands or objects and then onto other people's hands and in mouths. The virus may also be spread by direct contact with discharge from the nose and throat. People are infectious as long as virus is shed in their stool, which can occur for several weeks. People usually get sick 3 to 6 days after being exposed to the virus.

Treatment: There is no specific treatment available.

Diagnosis: Diagnosis is usually based on clinical symptoms.

School Attendance guidelines There is no need to exclude anyone well enough to attend school. Because the virus is contagious before symptoms begin, other students and staff have already been exposed.

Notification guidelines: When Hand, foot and mouth syndrome occurs within the school population, the school nurse and school physician should determine, based on their medical judgement, whether some or all parents and staff should be notified. When necessary they may consult with the MDPH or their local Board of Health. Prior to parent notification, it should be discussed with the school administrator. A letter to parents about coxsackievirus is available from MDPH.

Stop-Spread Guidelines

- Follow strict hand washing and personal hygiene procedures. Always wash hands, especially after using the bathroom or diapering or assisting a student in the bathroom, and before eating or handling food. Also, careful attention to environmental cleaning and sanitation is very important in reducing spread. For additional Stop-Spread Guidelines, see page 8-17.

DISEASES SPREAD THROUGH THE RESPIRATORY TRACT

Respiratory tract diseases are spread through microscopic infectious droplets of the nose, eye, or throat, most of which are shared via hand contact with infected fluids and then contact with surfaces that uninfected people touch to pick up the germs. Airborne transmission of any disease spread is unclear. Respiratory tract diseases

may be mild (viral colds and strep throat) or life threatening (bacterial meningitis). Some of these diseases are common in children; others, like the viral cold, affect all ages fairly equally.

When an infected person talks, coughs, sneezes, or blows his or her nose, infectious droplets get on objects such as hands, books, pencils, toys, pens, or food, and can be touched, mouthed, or eaten by others. When the germs in these infected droplets come in contact with the nose, eyes, or mouth of an uninfected person, they can multiply and cause infection. Students often fail to wash their hands after touching their noses or eyes and are in constant physical or oral contact with objects around them. Adults and students often put their hands around their eyes, mouth, and nose. As a result, respiratory tract diseases spread easily in a group setting.

Stop-Spread Guidelines

- Hand washing and cleanliness are essential to stop the spread of all respiratory tract diseases. Encourage staff and students to wash their hands after wiping or blowing noses; after contact with any nose, throat, or eye secretions; and before preparing or eating food.
- Discourage the sharing of food.
- Air out classrooms daily, even in winter.
- Teach children and staff to cough or sneeze toward the floor or to one side, away from people. If they sneeze or cough into a hand or tissue, they must properly dispose of the tissue and wash their hands.
- Keep a supply of disposable towels and tissues in each classroom, and encourage their use.
- Dispose of towels or tissues contaminated with nose, throat, or eye fluids in a step-can with a plastic liner. Keep them away from food and classroom materials.

CAUTION: *Aspirin (or products containing salicylate) should **never** be used for fever control of **any** viral illness, but particularly if influenza or chickenpox is suspected because of the suspected rare association with Reye syndrome (vomiting, liver problems, and/or coma) and these types of illnesses.*

Common Illnesses

Colds and Influenza

Colds are mild infections of the nose and throat that are caused by many different viruses. The most common of these is a rhinovirus (nose virus). Cold symptoms include stuffy or runny nose, sore throat, coughing or sneezing, watery eyes, fluid in the ears, fever, and general fatigue. *Influenza* is also caused by viruses (influenza A or B) and has symptoms of high fever, chills, congestion, coughing, and muscle aches. Most people who get influenza feel too ill to go to school or work.

Transmission: Young children usually catch many colds each year and catch even more if they have younger siblings. The virus concentration in respiratory secretions is usually highest up to 7 days



before a person develops symptoms of illness. Viruses continue to be present in respiratory secretions for 2 to 3 days after symptoms begin. As a result, infected students and staff have already spread viruses before they begin to feel ill. In fact, students and adults often have mild colds that may go undetected but still cause them to be contagious.

Diagnosis: These viral illnesses are usually diagnosed by their symptoms. The viruses can be grown in special cultures in laboratories, but this process is time-consuming, expensive, and usually unnecessary.

Treatment: No medicines or treatments can cure these viral illnesses. Health care providers usually suggest rest and plenty of fluids. Sometimes a viral infection can be complicated by secondary *bacterial* infection (e.g., ear or sinus infections, pneumonia). An individual with high fever, persistent cough, or earache should be evaluated by a health care provider to determine whether there is a bacterial infection that requires antibiotic treatment. Children with chronic cardiac or respiratory conditions, including asthma or those who are immunosuppressed, should receive influenza vaccine every year.

CAUTION: *Aspirin (or products containing salicylate) should **never** be used for fever control if influenza or chickenpox is suspected because of the rare association between Reye syndrome (vomiting, liver problems, and/or coma) and influenza and chicken pox.*

School attendance guidelines: There is no need to exclude students and staff, as long as they feel well enough to attend.

Roseola (Sixth Disease)

Roseola is a viral infection that starts with a high fever (103° F or above) and lasts 3 to 4 days. Soon after the fever ends, the infected person develops a lacelike rash over the whole body but begins to feel well again.

Transmission: Most cases of roseola occur in children ages 6 to 24 months. Infection is rare before 3 months or after 4 years of age but can occur in older children. Roseola does not appear to spread easily, and, although occasional outbreaks have been reported, it is not known how it spreads. The greatest numbers of cases tend to occur in spring and summer. The period of communicability is not known but is probably greatest during the febrile period, before the appearance of the rash. The estimated incubation period is 5 to 15 days from exposure.

Diagnosis: There is no diagnostic test available. Diagnosis is made on the basis of clinical symptoms.

Treatment: There is no specific treatment for roseola other than supportive care to make the child more comfortable.

School attendance guidelines: Students may attend school when they feel well enough.

Group A Streptococcal Infections

A variety of infections, including strep throat, scarlet fever, rheumatic fever, and impetigo, are caused by Group A streptococci bacteria.

(See Diseases Spread Through Direct Contact for a discussion of impetigo.)

Strep throat infections are characterized by a very red, painful throat often accompanied by fever, tender and swollen lymph nodes (called glands by many people), headache, and stomach ache. Sometimes a strep throat will be accompanied by coughing, or less often, a runny nose. The vast majority of sore throats in children and adults are caused by cold viruses, *not* strep bacteria.

Scarlet fever is a type of streptococcal infection characterized by a skin rash. The rash usually consists of fine, red bumps that feel sandpapery and usually appear on the neck, chest, groin, and/or inner surface of the knees, thighs, and elbows. It may last only a few hours. Other symptoms are flushed cheeks, paleness around the mouth, and a red tongue that resembles the surface of a strawberry.

Rheumatic fever (abnormalities of the heart valves and inflammation of the joints) can develop 5 to 6 weeks after the occurrence of any type of strep infection that goes untreated. In rare instances, kidney disease can also follow an untreated strep infection. Therefore, it is very important that all cases of suspected strep infections be referred to health care providers for treatment. People with persistent sore throats without a runny nose should have a throat culture.

Transmission: Strep throats can occur at any age, but are most common among school-aged children, during the colder months, and in crowded situations. If one person in a family gets strep throat, other family members may also get it. The Group A streptococci are transmitted from one person to another through microscopic respiratory secretions. The incubation period lasts 2 to 5 days. People with strep throat are generally not infectious until their symptoms appear. They continue to be infectious until they have received treatment for a day or so.

Diagnosis: Throat cultures are used to diagnose strep infections. Rapid tests are now available through health care providers. Although the accuracy of these tests is generally high, sensitivity may vary. Therefore, negative rapid tests should be followed by a culture, if indicated.

Treatment: Strep infections are usually treated with an oral antibiotic, starting either at the onset of symptoms or after throat culture results are received. A single, long-lasting injection may also be used to treat strep.

School attendance guidelines: People who are only mildly ill can continue to attend school while awaiting the results of a strep culture, *if* the doctor has not begun antibiotic treatment. (If the culture proves to be positive, send them home.) Individuals who have a positive strep culture should stay home until after they have had *at least* 24 hours of antibiotic medicine and fever is gone. Antibiotics should be taken for the full course of prescribed treatment.

Notification guidelines: When strep infections occur within the school population, the school nurse and school physician should



determine, based on their medical judgement, whether some or all parents and staff should be notified. When necessary they may consult with the MDPH. Prior to parent notification, it should be discussed with the school administrator. (See Exhibit 8-9 for a sample letter to parents about Strep Throat.)

Stop-Spread Guidelines

- Follow the stop-spread guidelines for respiratory tract diseases.
- If there is a case of strep in the school, refer students or staff with sore throats to their health care providers for throat cultures.
- Be alert to an outbreak. If there are any cases associated with rheumatic fever, kidney disease or toxic shock, consult with the school physician about having all students and staff cultured.

Chickenpox and Shingles

Chickenpox is a very contagious disease caused by the varicella-zoster virus. It usually begins with a mild fever, symptoms of cold, and an itchy rash. The rash appears with small, red bumps on the stomach or back and spreads to the face and limbs. These bumps rapidly become blistered, may ooze, then crust over. People may have only a few bumps or may be totally covered.

Once a person has been infected with the varicella-zoster virus and gets chickenpox, the virus remains (without symptoms) in the body's nerve cells. In some people, the virus becomes active again later and is called *shingles* or zoster. With shingles, a red, painful, itchy, blistering rash appears, usually in a line along one side of the body. There is no fever. The virus shed in the blisters of the rash can cause chickenpox in a person who has not had it, if that person has direct contact with the infected shingle blisters.

Transmission: Anyone who is exposed to the varicella-zoster virus and has not had chickenpox before will almost certainly get it. Chickenpox is most common in school-aged children, while shingles is most common in adults. Chickenpox is generally not considered to be a serious disease in otherwise healthy people. However, pregnant women and people on medications that suppress the immune system (e.g., individuals with cancer) and sometimes teenagers and adults tend to experience a more severe disease from this virus.

Pregnant women and immune-compromised individuals who are susceptible to chickenpox should be referred to their physician **immediately** after exposure. Susceptible students and staff are those who do not know for sure that they have had chickenpox in the past or who have not had a blood test showing they had the disease and are now protected. Women who get chickenpox when pregnant are more likely to have serious complications. Individuals at risk can be given VZIG (varicella-zoster immune globulin) to prevent serious problems. For VZIG to work, it must be given within 4 days of exposure.

Individuals with chickenpox are contagious from 1 to 2 days *before* the rash appears until 5 days after the rash begins. The disease is spread by close contact (sharing breathing space or direct touching)



with infected secretions from the nose, throat, or rash. It takes about 10 to 21 days from the time of exposure until a person develops the symptoms of chickenpox (but typically 14 to 16 days).

Diagnosis: Chickenpox and shingles are usually diagnosed by the typical appearance of the rash.

Treatment: Healthy children are not usually treated for chicken pox. The symptoms may be treated with anti-itching medicine and lotions, medicine for fever control, fluids, and rest. Scratching should be avoided because it can increase scarring. Recently a new antiviral drug called acyclovir was developed to minimize the severity of chicken pox. Immuno-compromised individuals, pregnant women, teenagers, and adults can consult their physicians about this medicine. The American Academy of Pediatrics does not recommend its use in healthy children. A vaccine to prevent chickenpox is being developed and will be available soon.

CAUTION: *Aspirin (or products containing salicylate) should **never** be used for fever control because on rare occasions Reye syndrome (vomiting, liver problems, and/or coma) can result.*

School attendance guidelines: Students may return to school on the sixth day after the rash first appears (or when all blisters are crusted over and dry). In mild cases with only a few blisters, students may return to school sooner, if all lesions are crusted.

Students and staff with shingles carry the virus that causes chickenpox and could cause an outbreak. Therefore, *unless the shingles rash can be completely covered*, it is advisable that individuals with shingles stay home until the rash is crusted over and dry. The person with shingles must be very careful about personal hygiene.

Reporting requirements: A case of chickenpox must be reported to the local board of health. Cases of shingles do not need to be reported.

Notification guidelines: The school nurse and school physician should determine, based on their medical judgement, whether some or all parents and staff should be notified about the occurrence of chickenpox in the school. (See Exhibit 8-10 for a sample letter to parents about Chickenpox.) Fact sheets are available from MDPH and should accompany this notification. Prior to parent notification, it should be discussed with the school administrator.

Stop-spread guidelines

- Keep infected people away from school.
- Develop a system for immediate notification to parents and staff if a student or staff member develops chickenpox or shingles.
- Identify high-risk individuals (e.g., pregnant women, immuno-compromised individuals), and refer them to their health care provider immediately.
- Keep a person with chickenpox (or shingles with a rash that cannot be completely covered) at home until the rash is *completely* dry and crusted.



- Watch closely for early symptoms in others for 3 weeks following the most recent case. If a student or staff member develops a rash, he/she should be referred his/her health care provider.

Fifth Disease (Erythema Infectiosum)

Fifth disease, also known as erythema infectiosum, is a mild rash illness that occurs most commonly in children. It is called fifth disease because it was the fifth of six similar rash-causing illnesses to be described. Fifth disease is caused by parvovirus B19, which lives in the nose and throat and can be spread from person to person. Clusters or outbreaks of illness among children in school and early childhood programs are not unusual.

The first stage of illness consists of headache, bodyache, sore throat, low-grade fever, and chills. These symptoms last about 2 to 3 days and are followed by a second stage, lasting about a week, during which the person has no symptoms at all. In children, the third stage involves a bright red rash on the cheeks, which gives a “slapped cheek” appearance. This may be followed by a “lacy” rash on the trunk and arms and legs. The rash begins 17 to 18 days after exposure. The rash may appear on and off for several weeks with changes in temperature, sunlight, and emotional stress.

Adults may not develop the third-stage rash but may experience joint pain, particularly in the hands and feet. The disease is usually mild, and both children and adults recover without problems. In rare situations, some people, especially those with blood disorders such as sickle cell anemia and other hemoglobinopathies and those with weakened immune systems, may develop more severe symptoms.

Transmission: Parvovirus B19 can be spread by the respiratory route in close contacts such as in households, schools, day care and pre-school. When an infected person coughs, sneezes, or speaks, the virus is sprayed into the air. Contaminated droplets can then be inhaled or touched by another person. Women who develop fifth disease during pregnancy may pass the infection to their unborn fetuses. In rare situations, miscarriages and stillbirths have been associated with fifth disease during pregnancy. Other persons at high risk for complications include those with certain blood disorders and those with deficient immune systems.

Individuals with fifth disease are most infectious before the onset of their illness. They are unlikely to be infectious after the appearance of the rash and other symptoms. However, people with blood disorders and those with weakened immune systems who are ill with fifth disease may be infectious for a longer period of time.

Outbreaks typically begin in late winter or early spring and may continue until June. In outbreak situations, 10 to 60% of the children may develop fifth disease. Many people have already caught this disease before they have reached adulthood. It is estimated that about half of the adults in the United States have been infected with parvovirus B19 and are now immune. This level of protection may be higher among early-childhood program staff.

Diagnosis: The diagnosis in children is based on the clinical symptoms of the facial rash. For those at higher risk, a laboratory test

can detect newly formed antibodies to the parvovirus B19, documenting current or recent disease.

Treatment: There is no specific treatment for fifth disease. Health care providers may suggest treatment to relieve some symptoms.

School attendance guidelines: Students or staff with fifth disease should continue to attend school. By the time they are diagnosed with the rash, they are no longer contagious. (See Exhibit 8-11 for a sample letter to parents about Fifth Disease.)

Notification guidelines: When Fifth Disease occurs within the school population, the school nurse and school physician should determine, based on their medical judgement, whether some or all parents and staff should be notified (see Exhibit 8-11 for a sample letter). Fact sheets are available from the MDPH and should accompany parent notification. Prior to parent notification, it should be discussed with the school administrator.

Prevention: Careful hand washing (especially after handling discharge from the nose and throat and before eating or handling food) is the first line of defense. Currently, there is no vaccine against fifth disease.

Special Note for Pregnant Women: Although still being studied, fifth disease is not known to cause birth defects. Miscarriages and stillbirths have been reported rarely in women who developed fifth disease during pregnancy. Recent evidence suggests that the risk of an adverse effect during pregnancy is extremely low. However, women who develop fifth disease during pregnancy should be followed closely by their obstetrician.

The decision to try to decrease any person's risk of infection by not attending a school environment where there is an outbreak should be made by the person after discussion with family members, health care providers, public health officials, and employers. A policy to routinely exclude members of high risk groups is not recommended.

Serious Respiratory Tract Illnesses

Meningococcal Illnesses

Bacteria called *Neisseria meningitides* can cause meningococcal illnesses that are serious and sometimes fatal. The most common of these illnesses is *meningitis*, an inflammation of the covering of the brain. People with this type of meningitis *must* be hospitalized immediately and receive intravenous antibiotics. The disease usually starts suddenly with fever chills, lethargy, and a rash of fine red freckles or purple splotches. Older children and adults may experience severe headache, neck pain, and stiffness.

Transmission: Although children younger than age 6 months are most often affected, older children and adolescents are the next most commonly affected group. Adults can become ill as well. The bacteria are passed between people who are in *close contact* through coughing, sneezing, nasal discharge, saliva, and touching of infected secretions. It can be spread by sharing eating utensils, drinking cups, water bottles, and kissing. While household contacts are at the highest risk of contracting this illness, others sharing these exposures are at risk as well.



Many people can be carriers and have these bacteria normally in their nasal passages, throats or mouths without symptoms of illness. Both sick people and carriers can pass the germs to others. These bacteria, however, cannot live on environmental surfaces. Usually illness occurs 1 to 4 days after a person has been exposed, although incubation can take up to 10 days. If one infection occurs at a school, this may indicate that there may be more than the usual number of carriers, and the risk of disease spread is, therefore, greatly increased. Individuals are considered infectious for approximately 24 hours after the beginning of effective antibiotics.

Diagnosis: Individuals showing signs and symptoms of this disease are diagnosed by culturing their blood or spinal fluid. It may take up to 72 hours to grow and identify the bacteria. Sometimes a doctor can make an earlier diagnosis by looking at a person's spinal fluid under a microscope.

Treatment: Individuals with these infections require hospitalization for special care and a closely supervised program of antibiotics. Sick people *and* anyone they have had close contact with (e.g., household members and friends sharing eating and drinking utensils, such as water bottles, or kissing) *in the 2 weeks prior to their onset* of symptoms should also take an oral antibiotic (in most cases this medicine will be rifampin) to lower the risk of the spread of the disease to others. Preventive treatment of all close contacts should be implemented up to the first 2 weeks after onset of the first case but preferably *as soon as possible within the first 24 hours*.

If only one case occurs in a classroom, prescribing antibiotic treatment for the entire classroom is not currently recommended unless the members meet the definition of a "close contact." However, if more than one case should occur in a school or classroom, after consultation with the Division of Epidemiology at MDPH, the recommendation on who should receive preventive treatment with antibiotics, e.g., rifampin, might be expanded. **Note:** Exposed pregnant women and individuals with liver disease should consult with their health care provider to determine which preventive antibiotic is safest for them.

School attendance guidelines: Individuals with meningococcal disease are too ill to attend school. They may return when they are well (after hospital treatment) and after they have taken rifampin or other effective prescribed antibiotic for 2 days. All individuals who have been determined to be a close contact with a person who has meningococcal disease should not return to school until their treatment with antibiotics is started. If antibiotics are not taken, contacts should be excluded for 1 week after onset of the last case.

Reporting requirements: A case of meningococcal illness must be reported to the local board of health immediately.

Notification guidelines: The school nurse and school physician, collaborating with the local board of health and school officials, should develop a system for *immediate* notification of parents, staff and the proper health authorities if a student or staff member becomes ill with a meningococcal illness. When necessary they may consult with the MDPH.



Due to the seriousness of this illness, there is often a great deal of concern among parents and the community. Providing information about the number of cases, the symptoms, and recommended precautions often allays community concern.

Parents of any student enrolled within 1 month of the last case should receive written information about meningococcal diseases so they may take appropriate precautions. Fact sheets concerning meningitis are available from MDPH and may accompany parent notifications. (See Exhibit 8-12 for a sample letter to parents of close contacts about Meningococcal Illnesses and Exhibit 8-13 for a sample letter to parents about Meningococcal Illnesses.)

Stop-spread guidelines

- The best way to prevent spread of meningococcal disease is to alert everyone that a case has occurred so that appropriate preventive treatment can begin.
- Instruct significantly exposed staff and the parents of significantly exposed students to contact their health care providers immediately.
- Anyone having had *close contact* with the ill person (e.g., household members and friends sharing eating and drinking utensils, sharing water bottles, or kissing) *in the 2 weeks prior to the onset of symptoms* should take antibiotics, e.g., rifampin, per licensed prescriber's order, to lower the risk of the spread of the disease to others. This treatment of all close contacts should be done within the first 2 weeks of diagnosis of the first case, but preferably as soon as possible *within the first 24 hours*. Deciding who is a close contact can be established by consulting with the school nurse, school physician, and/or local board of health.
- Inform parents and staff that antibiotics do *not* provide absolute protection against disease. *Therefore, any student or adult who develops symptoms such as fever or headache* requires prompt evaluation by a health care provider.
- Monitor the situation closely for 2 to 3 weeks. Make sure all ill students and staff are seen by their doctors and that the school is notified if another person develops meningococcal disease. Be sure that the parents of any student who is enrolled during this period are informed about the risks so that they may take appropriate precautions.

Tuberculosis

Tuberculosis (TB) is a disease that usually affects the lungs causing cough, fever, fatigue, weight loss, and night sweats. TB disease starts with TB infection, a small number of TB germs (bacteria) living in the body without causing harm. Most individuals with TB *infection* never become ill with TB *disease*.

As long as the immune system remains healthy, TB germs are walled up in hard capsules where they cannot cause illness or be spread to others. However, TB bacteria remain alive in these capsules and may overcome the body's immune system to cause disease. Therefore, individuals with TB *infection* remain at risk of developing TB *disease* throughout their lifetime.



Transmission: A person gets TB infection when live TB germs are inhaled deeply into the lungs. TB infection is *not* easy to get because airways trap germs, preventing them from entering the lungs. Tiny airborne particles containing TB germs may be produced by the cough or sneeze of persons with TB lung disease. A person with TB lung disease able to spread TB germs is referred to as “contagious” or “infectious”. Individuals most at risk of getting TB infection either live, work, or are otherwise in contact with a contagious person, sharing indoor air for a prolonged time. TB germs *cannot* be spread by handling food, sharing eating utensils or objects (pencils, books, clothing, etc.)

Diagnosis: A positive TB skin test indicates TB infection but not necessarily the disease. The skin test is determined to be positive when there is a significant amount of swelling at the skin test site 48 to 72 hours after the test is placed. TB *disease* is diagnosed by symptoms and additional clinical tests. Typical symptoms are fever, night sweats, weight loss, fatigue, and cough. Individuals with these symptoms should seek attention from a health professional who will check for an abnormal chest X-ray and/or perform other clinical tests.

Treatment: Individuals with TB *infection*, may be treated with oral anti-TB medication to prevent the *infection* from progressing to *disease*. Medication is usually taken once daily for 6 to 12 months.

To cure TB *disease*, several different medications are prescribed for 6 to 12 months. Medications must be taken according to instructions, or TB germs may become drug resistant making treatment difficult or even impossible. Recent media attention has focused on this problem, often referred to as “multi-drug-resistant (MDR) TB”. MDR TB is no more likely to cause infection or disease than ordinary TB bacteria, but MDR TB infection and disease are more difficult to treat.

School attendance guidelines: *Students or staff diagnosed with suspected or confirmed TB disease* should not attend or work in schools until they have begun taking prescribed anti-TB medications and their health care provider states, in writing, that they are not contagious. Within two weeks, individuals taking such medications are generally not contagious.

Students or staff who have a positive TB skin test only (with a normal chest X-ray and no symptoms) do *not* have disease, are *not* contagious, and should *not* be restricted in any way. They may be advised to take anti-TB medicine to prevent the possibility of developing TB disease.

Reporting requirements: A case of TB *disease* must be reported directly to the MDPH Division of TB Control. The Division of TB Control, in conjunction with the local board of health, will help determine if screening of children and staff is required. Those with a positive skin test reaction (including persons with a history of BCG vaccination) require medical evaluation generally consisting of a physical examination and chest X-ray. Medical evaluation and treatment for TB infection or disease is available to the public at TB clinics sponsored by the MDPH throughout the state.



Notification guidelines: When TB disease occurs within the school population, the school nurse, school physician, and the school administration, in consultation with the local board of health and the MDPH Division of TB Control should determine whether some or all parents and staff should be notified.

What School Administrators, Staff, and Parents Should Know About TB

- Infants and young children under age 10 with TB lung disease are usually *not* contagious.
- MDPH recommends baseline screening with a Mantoux skin test prior to a child's entry into school. For communities deemed to be high risk (as defined by prevalence rates), additional screening of students prior to entry into seventh grade or at the time of routine physical examinations in middle school is recommended. The local board of health can provide information about the rate of TB in the local area.
- Students or staff who have a positive TB skin test only (with a normal chest X-ray and no symptoms) do *not* have disease, are *not* contagious, and should *not* be restricted in any way. They may be advised to take anti-TB medicine to prevent the possibility of later developing TB disease.
- M.G.L. c. 71, s. 55B as amended by Chapter 85 of the Acts of 1981 requires a one-time certification of all public and private school employees to ensure they are free of active tuberculosis. All new employees (paid or volunteer) must be screened by a Mantoux skin test not more than 90 days prior to school employment. "Tine" tests and other quick skin tests for TB infection are not legally acceptable because they are less accurate. School personnel covered by this mandate include superintendents, principals, directors, teachers, food handlers, custodians, school bus drivers, nurses, doctors, or other individuals whose duties, official or voluntary, bring them into direct contact with students. Individuals with a positive reaction to this test must, by law, receive appropriate evaluation not more than 90 days prior to beginning work *and* obtain written medical clearance from their health care provider.
- Paid or volunteer staff who have documented proof of a prior *positive* TB skin test do *not* need to be TB skin tested before beginning work, however, they must have a chest X-ray not more than 90 days prior to beginning work.

DISEASES SPREAD THROUGH DIRECT CONTACT

Superficial Infections and Skin Infections

Superficial infections and skin infections — including impetigo, ringworm, conjunctivitis, scabies, and pediculosis — are caused by superficial bacterial or viral infections or parasitic infestations. They are common and are not serious. They are spread by direct contact with infected secretions, infected skin areas, or infected objects or articles. Because students are constantly touching their surroundings and the people around them, these infections are easily spread among students and staff — for example:



- A student's arm has sores with discharge. During interaction, this discharge gets on another individual's arm and into a cut or scratch.
- A hat belonging to a student with head lice is used by another student. A louse from the hat crawls onto the head of the second student.
- A student with runny eyes rubs them with his or her hands before picking up a book, pen, or pencil, contaminating them with eye discharge. Other students become infected by picking up those objects and then rubbing their own eyes with contaminated hands.

Stop-Spread Guidelines

- Follow hand washing and cleanliness guidelines that include:
 - Making sure staff and students thoroughly wash their hands after contact with any possible infectious secretions.
 - Using *free-flowing water* for hand washing.
 - Using liquid soap dispensers whenever possible.
 - Always using disposable tissues or towels for wiping and washing.
 - Never using the same tissue or towel for more than one student.
 - Disposing of used tissues and paper towels in a lined and covered container that is kept away from food and materials.
 - Washing or vacuuming frequently used surfaces such as tables, counters, furniture, and floors daily.
- Do not permit students to share personal items such as combs, brushes, hats, or clothing.
- Provide adequate *individual* areas for students to keep their outer clothing items such as coats, hats, scarves, and mittens.
- Wash and cover sores, cuts, and scrapes promptly, and keep infected eyes wiped dry.
- Report rashes, sores, running eyes, and severe itching to a student's parents so they may contact their health care provider for diagnosis and appropriate treatment.

Impetigo

Impetigo is a very common skin infection caused by streptococcal ("strep") or staphylococcal ("staph") bacteria. The first indication of infection may be discharge at an injured spot on the skin such as an insect bite, cut, or burn that can be spread easily by the individual's hands to other areas of the skin. Impetigo most commonly occurs on the face. The red, rounded, and "oozing" rash may have a flat, honey-colored crust and may be itchy. Impetigo caused by either strep or staph bacteria, sometimes displays blisters that break easily leaving raw, red, "oozing" skin exposed. Impetigo caused by strep bacteria may induce the development of kidney

disease under very rare circumstances. Impetigo most commonly occurs during warm summer months.

Transmission: Ordinarily, the skin protects the body from bacteria. When the skin is broken (cut, scraped, bitten, scratched), bacteria may get under the surface, multiply, and cause an infection. Children often have multiple cuts and scrapes on their bodies that make them more vulnerable to impetigo than adults. Most individuals contract impetigo at least a few times during childhood. Impetigo bacteria are found all over infected skin, on the crust, and in the discharge. As long as lesions exist, bacteria can be spread to another person who directly has direct contact with the skin or a surface contaminated by discharge or crusts.

Diagnosis: Impetigo is typically diagnosed by appearance. Bacterial cultures are not usually needed. Strep and staph impetigo may look the same, although staph tends to cause blisters more often.

Treatment: Typically some combination of a special soap, an antibiotic ointment, and occasionally an oral antibiotic is prescribed.

School attendance guidelines: Students and staff do not need to be sent home in the middle of the day if a suspected impetigo rash is noticed. Wash the rash area with soap and water and cover it lightly. *Those who touch the rash should wash their hands immediately.* Affected students and staff may return to school after using medicine for 24 hours. The sores should be kept lightly covered until they have dried up completely.

Notification guidelines: When impetigo occurs within the school population, the school nurse and school physician should determine, based on their medical judgment, whether some or all parents and staff should be notified. When necessary they may consult with the MDPH. Prior to parent notification, it should be discussed with the school administrator. (See Exhibit 8-14 for a sample letter to parents about Impetigo.)

Stop-Spread Guidelines

- When students suffer and injury that causes a break in the skin, wash the area *thoroughly* with soap and water and dry it carefully.
- When there is a risk of impetigo, wash the rash with soap and water and cover it loosely with gauze, a bandage, or clothing.
- Be sure those who touch the rash wash their hands well.
- Dispose of any soiled tissues or bandages carefully, and keep any possibly contaminated clothing in a plastic bag.
- Instruct the parents to have the student examined by their health care provider.
- Be alert to an outbreak. If there are any cases associated with rheumatic fever, kidney disease or toxic shock, consult with the school physician about having all students and staff cultured.



Ringworm (Tinea)

Ringworm (or tinea) is a mild infection of the skin or nails caused by several different fungi. Ringworm infections are not serious and are easily treated. On the skin, ringworm appears as a flat, growing, ring-shaped rash. The edges of the circle are usually reddish and may be raised, scaly, and itchy; the center of the circle is often clear. Another type of ringworm fungus causes skin color to become lighter in flat patches, especially on the trunk and face. On the scalp, infection typically begins as a small bump and spreads outward, leaving scaly patches of temporary hair loss. Scales, cracks, and blisters may be seen on the skin between the toes. A chronic infection of the nails may cause thickening, discoloration, and brittleness.

Transmission: Ringworm is spread when infected skin comes in direct contact with healthy skin or when infected broken nails or skin flakes fall on the floor, or get into hair scissors or clothes and are touched by other people. A person with ringworm is infectious as long as the fungus is present in the infected area.

Diagnosis: Ringworm infections are frequently diagnosed by their typical appearance. Sometimes a special lamp is used to examine the body for ringworm. Occasionally, scrapings of suspicious skin may be examined under a microscope or cultured to see if any ringworm fungus is present.

Treatment: An antifungal ointment is typically applied to the skin for several weeks. Occasionally, oral antifungal medicine is prescribed, particularly if the diagnosis is ringworm of the scalp.

School attendance guidelines: There is no need to exclude students or staff with these common, mild infections, once treatment has been started. Refer individuals with a suspicious rash to their health care providers for appropriate diagnosis and treatment, and permit them to return to school as soon as treatment has begun.

Notification guidelines: If more than one person in the class develops ringworm, the school nurse and school physician should determine, based on their medical judgement, whether some or all parents and staff should be notified. When necessary they may consult with the MDPH. Prior to parent notification, it should be discussed with the school administrator. A sample letter to parents is available from MDPH.

Stop-spread guidelines

- Keep the environment as clean, dry, and cool as possible since ringworm fungi grow easily on moist, warm surfaces.
- Follow general cleanliness and hand washing guidelines.
- Keep affected areas of the body loosely covered with gauze, bandage, or clothing to prevent shedding of infected scales.

Conjunctivitis (Pinkeye)

Conjunctivitis (or pinkeye) is a mild inflammation of the eyes most often caused by a virus but occasionally caused by bacteria or allergies. With this inflammation, the white part of the eye become



pink, and the eyes produces lots of tears and discharge. In the morning, discharge may make the eyelids stick together.

Transmission: Conjunctivitis is most common among children who may spread it to other children or to people taking care of them when pus gets into an uninfected individual's eyes. Individuals may pass the infection by rubbing their eyes, spreading discharge to their hands, and then touching someone or something else. Conjunctivitis may also be spread when washing, drying, or wiping an individual's face and then using the same washcloth, towel, paper towel, or tissue on another's face.

Diagnosis: Conjunctivitis is diagnosed by the typical appearance of the eye(s). However, it is often difficult to tell if the cause is bacterial or viral. Occasionally the doctor will examine the discharge under a microscope or culture it.

Treatment: Often an antibiotic eye medication will be prescribed to shorten the length and severity of symptoms and decrease infectiousness. It is recommended that individuals with conjunctivitis be treated by rinsing out the eye and by using a prescribed antibiotic eye medicine to prevent spread of the infection.

School attendance guidelines: Individuals with conjunctivitis do not need to leave school in the middle of the day. Inform parents that the symptoms were noticed, and permit infected students and staff to return the day after treatment has begun. Parents should notify the school if the health care provider decides not to prescribe a medicine.

Notification guidelines: When conjunctivitis occurs within the school population, the school nurse and school physician should determine, based on their medical judgement, whether some or all parents and staff should be notified. When necessary they may consult with the MDPH. Prior to parent notification, it should be discussed with the school administrator. (See Exhibit 8-15 for a sample letter to parents about conjunctivitis.)

Stop-spread guidelines

- Have affected individuals keep their eyes wiped free of discharge.
- Teach everyone to wash their hands after wiping their eyes.
- Be sure articles that may touch the children's eyes (e.g., prisms, binoculars, pieces of microscope, cameras) are washed well with soap and water at least once daily. The ocular pieces of microscopes need to be sanitized after use by individual students. Consideration should be given to avoiding the use of such instruments during an outbreak.

Scabies

Scabies, a common skin infection, is caused by a microscopic parasite, a mite, that infects only humans. The female mite burrows under the skin to lay her eggs which hatch and start the infestation cycle. An infected person typically has only 10 to 12 mites on the body.



Symptoms of scabies generally do not appear until 2 to 6 weeks after initial exposure. Upon re-exposure, symptoms may appear within days. Scabies symptoms include an intensely itchy rash with red bumps and burrows — short, wavy, dirty-looking lines in the skin. An infected individual's scratch marks may cover up the typical appearance of the rash. The rash typically appears on the sides of the fingers and finger-webs, wrists, elbows, underarms, and belt lines. In infants, the head, neck, palms, soles, and buttocks may also be involved.

Transmission: Anyone who has contact with the mite may become infested with scabies through skin-to-skin contact or skin contact with clothes or bedding. Mites typically survive only 3 days off the body and cannot jump or fly. To be spread, there must be direct contact with skin. Scabies can be transmitted until all mites and eggs are destroyed by treatment.

Diagnosis: Scabies is usually diagnosed by the typical appearance of the rash and accompanying symptoms and by examining skin scrapings under a microscope to detect the mite or its eggs.

Treatment: Scabies is usually treated with one of several prescription mite-killing creams or lotions applied once to the skin and then washed off after a specified period of time. Medication to relieve the itching is often necessary as well. Even after effective therapy, itching may persist for up to 4 weeks. Some doctors treat all household members (even those without symptoms) to prevent the likelihood of spread within a household.

School attendance guidelines: Students or staff do not need to leave school in the middle of the day if a rash that appears to be scabies is noticed. Ask parents to take infected children to their health care provider for diagnosis and treatment. Infected individuals may return the day after treatment is started.

Notification guidelines: When scabies occurs within the school population, the school nurse and school physician should determine, based on their medical judgement, whether some or all parents and staff should be notified. (Fact sheets about scabies are available from the MDPH.) Prior to parent notification, it should be discussed with the school administrator. A sample letter to parents is available from MDPH.

Stop-spread guidelines

- Wash and rinse on the *hot* cycle all washable items that have come into contact with an infected individual's skin during the 72 hours prior to treatment. Use a *hot* dryer for 20 minutes.
- Store difficult-to-wash items such as stuffed toys and pillows in tightly closed plastic bags for 1 to 2 weeks before using again.
- Thoroughly vacuum all carpets and upholstered furniture.
- Talk with the school physician if there seems to be a major problem with scabies because it may be prudent and necessary to treat all students and adults in the group once.



- Do *not* use pesticide sprays in an attempt to stop the spread as they can be harmful to people and animals.

Pediculosis (Head Lice)

Head lice are tiny insects that live only on people's scalps and hair. Head lice hatch from small eggs, called nits, that are firmly attached to individual hairs near the scalp and cannot be easily moved up or down the hair (as could specks of dandruff). Nits may be found throughout the hair but are most often located at the back of the scalp, behind the ears, and at the top of the head. Eggs hatch in about 10 days, with new lice reaching adulthood in about 2 weeks. The female louse, about the size of a sesame seed, typically lives for 20 to 30 days and lays about six eggs a day. Lice live by biting and sucking blood from the scalp. Lice can survive up to 8 hours between feeding and can survive off the body, although generally not for more than 48 hours.

The major symptom of head lice is itching caused by the bite of the louse. Persistent scratching of the head and back of the neck should be cause for concern. Red bite marks and scratch marks may be observed on the scalp and neck, and a secondary bacterial infection can occur, causing oozing or crusting. Swollen neck glands may also develop.

Transmission: Head lice should not be considered a sign of unclean individuals or homes. They may affect individuals of any age or sex. Anyone who has close contact with an infested individual or shares personal items can become infested. Lice are spread *only* when they crawl from person to person directly or crawl onto shared personal items, such as combs, brushes, head coverings, clothing, bedding, or towels. An infested individual can transmit head lice to others continuously until undergoing treatment to kill the insects and eggs.

Diagnosis: Diagnosis is usually made by detecting nits, tiny, pearl-gray, oval-shaped specks attached to the hair near the scalp. Use a magnifying glass and natural light when searching for them on the hair at the back of the neck, behind the ears, and at the top of the head.

Treatment: Treatment consists of getting rid of the lice from infested individuals, their surroundings, and their personal items. All household members and individuals with close physical contact should be examined for lice and treated with one of the recommended shampoos or hair rinses. Pyrethrin products, which are now sold over-the-counter, are often recommended if infested. Some health care providers may routinely recommend simultaneous treatment of the members of a household.

For individuals suspected of having head lice:

1. Refer them their health care provider, for proper diagnosis and treatment. *Medications should be used very carefully. A physician must be consulted before treating infants, pregnant or nursing women, or people with extensive cuts or scratches on the head or neck.*
2. Treatment includes shampooing or rinsing the hair with medicine.



3. After appropriate treatment, removal of nits is not necessary to prevent spread. Sometimes, removal is desired for aesthetic reasons. This is a difficult and time-consuming process because nits typically have a firm grip on the hair. A solution of vinegar and water may help loosen nits so they can be removed more easily with a special, fine-toothed, nit-removal comb.
4. Check for nits daily for the next 10 days. If new nits or newly hatched lice appear, treatment may need to be repeated.
Treatment is typically repeated in 10 days to kill newly hatched lice even when an ovicidal preparation is used.

To treat personal items and surroundings in the school environment:

- Machine wash all washable and possibly infested items in *hot* water. Dry them in a *hot* dryer.
- Put non-washable items (furry toys, pillows) in a hot dryer for 20 minutes or dry clean them.
- Place items that cannot be washed or dried in a tightly sealed plastic bag for 10 days (the life cycle of a louse).
- Soak combs and brushes for 10 minutes, or wash them with a shampoo approved to kill lice.
- Thoroughly vacuum rugs, upholstered furniture, and mattresses.
- Do not use insecticide sprays in an attempt to stop the spread because they can be harmful to people and animals.

School attendance guidelines: Individuals found to have an active case of head lice should be treated immediately. Notify parents that the student may not return to school until treated. Other close contacts should be checked to determine if there are other cases. If a school is having a recurrent problem with head lice, morning head checks should be conducted before students mingle.

Removal of nits is difficult and the majority of nits will be killed by the appropriate treatment. “No Nit” policies have not been demonstrated to be effective in controlling head lice. However, the school, in consultation with the school nurse and/or physician, should decide on the best policy for the school and the parents. Regardless of the policy, to ensure successful treatment the children should be checked for new nits for 10 to 14 days after treatment.

Notification guidelines: When pediculosis occurs within the school population, the school nurse and school physician should determine, based on their medical judgement, whether some or all parents and staff should be notified when a case of head lice occurs in the school. Prior to parent notification, it should be discussed with the school administrator. Fact sheets are available from MDPH. See Exhibit 8-16 for a sample letter to parents about Head Lice.

Stop-spread guidelines

- Learn to recognize nits, and regularly check students’ heads and hair when there is a case of head lice diagnosed in the classroom.



Teach parents to recognize nits and to check family's hair periodically. Because outbreaks of head lice occur periodically in almost all schools and because parental concern may exceed the threat of head lice to health, this is a prime area for preventive education and information. A well-organized and prompt response to the first few cases can prevent a widespread problem and avoid the spread of misinformation.

- If a case is identified, follow recommended treatment procedures closely. If a parent finds nits, it should be reported to the school nurse who can check close contacts.

General Infections and Systemic Infections

Infections such as cytomegalovirus, hepatitis A, hepatitis B, hepatitis non-A, hepatitis non-B, herpes simplex infection, infectious mononucleosis, and sexually transmitted diseases are transmitted by direct contact and can be serious. Individuals with these infections may experience symptoms ranging from no illness or mild illness (such as cold sores) to total body illness. Some infections, such as syphilis, are treatable; others, such as cytomegalovirus, are not. What they have in common is the way they are spread from person to person.

These infections may be contracted by anyone, and individuals can carry the germs in their body secretions for months or even years without symptoms. Germs that cause these infections are spread when infected bodily secretions penetrate the skin, blood stream or mucous membrane of another person, enter the other person's body, and multiply. This process can occur when germs come in contact with skin that is broken, cut, or scraped or contact mucosal surfaces such as the inside lining of the mouth, eyes, nose, rectum, or sex organs. These infections may also be transmitted from an infected mother to her newborn infant.

Stop-Spread Guidelines

- Assume that all body secretions are potentially contagious.
- Insist that staff and students wash their hands well after any contact with blood, saliva, urine, stool, skin sores, or genital secretions.
- Make sure that staff and students place disposable items that come in contact with body secretions or blood (tissues, bandages, paper towels, sanitary napkins) in a lined, covered step-can that is kept away from food and materials. (See also the section on Disposal of Medical Waste in Chapter 4 for guidelines for preparing and disposing of infectious waste in the school setting.)
- Store clothing and other personal items that come in contact with body secretions or blood separately in plastic bags, and send them home for separate laundering and bleaching.
- Wash and sanitize surface areas and objects that come in contact with body secretions or blood using a bleach solution. Clean or dispose of cleaning items (mops, rags, and towels) properly.
- Do not permit aggressive behavior such as biting and scratching that may result in injury or exposure to blood or bodily secretions.



- Do not permit sharing of personal items such as toothbrushes, razorblades and washcloths that may have been contaminated with blood or other body fluids.

Cytomegalovirus (CMV) Infection

Cytomegalovirus is a very common infection typically affecting young children. In most cases, CMV causes no symptoms. Occasionally, children or adults with CMV will experience mononucleosis-like symptoms such as fever, swollen glands, and fatigue. Individuals infected with CMV may have the virus in their bodies for several years without symptoms. During this time, they continue to shed the virus in such body fluids as saliva, urine, genital fluids, and (rarely) blood. Once people are infected with CMV, they develop antibodies that prevent them from getting new CMV infections.

CMV is of particular concern for individuals in the classrooms of young children and children with special health care needs because it can cause problems for pregnant women caring for these children. If a pregnant woman *who has never had* CMV becomes infected, especially during the first trimester, the fetus may also become infected. In rare cases, the fetus may suffer mental retardation, hearing loss, vision disturbances, or other serious problems. The mother may not realize she is sick or may suffer only a mild, flu-like illness. CMV can be a serious infection for immuno-compromised children and adults, such as those with AIDS, certain cancers, or those being treated with immuno-suppressed drugs.

Transmission: CMV is shed in highest rates by children from the ages of 1 to 3 years. The virus can also spread to people who have regular, close physical contact with children's secretions. At any given time, 20 to 80% or more of children may have CMV but show no signs of illness. Spread of the virus requires direct contact with infected fluids (saliva and urine) that are then transferred to a mucous surface (inside the mouth, genital tract, or lining of the eye) or into the bloodstream through a break in the skin, needle stick, or blood transfusion. Spreading among children can occur by sharing mouthed objects that have infected saliva on them. In adolescents and adults, sexual transmission can occur. It can also be transmitted from mothers to newborns. The virus can survive several hours on surfaces outside the body.

Diagnosis: Most individuals with CMV are not diagnosed because they show no symptoms. Diagnosis of the CMV virus can be made from culture of infected fluids or by blood tests for the CMV antibodies.

School attendance guidelines: Students who are known to have CMV may continue to attend school. Testing of students to detect CMV excretion is not recommended.

Reporting requirements: There is no requirement to report CMV infection. It is common and frequently occurs unrecognized and undiagnosed in the community.

Stop-spread guidelines

- *Make sure that everyone* (especially pregnant women or women trying to become pregnant), *always wash his or her hands after contact with urine, saliva, stool or blood.*

- Women who work with young children or students with special health care needs and might become pregnant should be referred to their physician or health department for counseling regarding risk of infection in that setting. Counseling may include testing for immunity against CMV infection.

Herpes Simplex Infection

Herpes simplex viral (HSV) infections are characterized by skin blisters or sores that can be very pruritic and painful. Once a person is infected, these viruses remain in nerve cells, and HSV tends to recur at the same places on the body again and again. There are two types of herpes simplex virus: HSV type 1 (usually found in the mouth) and HSV type 2 (usually found on the genitals).

HSV type 1 is extremely common. The first infection typically occurs in childhood. It is mild, and often goes unnoticed. It may come in the form of *gingivostomatitis* — fever accompanied by widespread painful ulcerations (sores) in the mouth. HSV usually recurs as cold sores — single or multiple blisters around the lip. In rare cases, HSV may be spread by direct contact and cause infection on a finger (*herpetic whitlow* — painful, recurrent blisters of a finger) or in the eye (*herpetic keratitis* — recurrent ulcerations of the cornea) or other places on the skin. HSV-1 dermatitis/conjunctivitis (*herpes gladiatorum*) has been diagnosed in wrestlers and other contact-sport participants. (See section on sports-related infectious diseases later in this chapter.)

HSV type 2 is the cause of most cases of genital herpes that occur primarily in adults and is sexually transmitted. First infection is often characterized by painful genital blisters and ulcers accompanied by fever and can last 2 weeks. Recurrence is common, usually as localized, less painful ulcers that go away in 7-10 days and are not accompanied by fever. Recurrence may also be asymptomatic.

Herpes of the newborn is most often caused by HSV type 2 and occurs when a newborn infant passes through an infected birth canal. The resulting illnesses range in severity from skin blisters to total body disease resulting in severe brain damage or death. An infant who survives may have recurrent skin blisters due to HSV.

Herpes infection in children is generally caused by HSV type 1, and, while uncomfortable, is rarely serious. People who have severe eczema or immune system problems may experience more severe symptoms of herpes infection. Children should be cautious about HSV spread to hands and eyes. Touching lesions should be discouraged as much as possible. Young children with HSV lesions also need to be monitored to avoid spread to newborn infants.

Transmission: HSV type 1 is most common in young children; HSV type 2 (due to its sexual transmission) is more common in adults. HSV type 2 may be diagnosed in children in unusual circumstances or as a result of sexual abuse. HSV is shed in the secretions of the blisters and ulcers. Spread of both HSV 1 and 2 requires direct contact of virus-containing secretions with a mucous membrane inside the mouth, lining of the eyes, rectum, or genitals or with broken skin such as cuts. Transmission may also occur in sports with skin-to-skin contact.



Because herpes viruses can survive as long as 4 hours on any surface, mouthed objects contaminated by virus-containing saliva may transmit infections of the mouth. Kissing on the mouth in child care settings should be avoided.

Diagnosis: Diagnosis is usually made based on the distinctive appearance of the blisters or sores. A doctor may also examine material under a microscope or do a special viral culture.

Treatment: Antiviral therapy for HSV infections has recently become available. Generally this therapy is useful only for serious HSV infections (such as in the newborn, for infections of the brain or eye, or for certain cases of genital herpes). There is no evidence that these medicines are of any benefit to the common HSV infections in the mouth.

School attendance guidelines:

- Students or staff with open, oozing skin sores (including herpetic whitlow) that cannot be covered should not attend school.
- If individuals typically put their fingers in their mouth, they should be excluded until the lesions are crusted over.
- In the case of students who are drooling or have biting behavior, permit them to return to school settings when blisters are crusted over.
- Students or staff with *skin blisters* that cannot be covered should be permitted to return when the blisters are crusted over.
- *Do not exclude* students or staff with mouth sores or skin blisters that can be covered or those with genital herpes.
- Students or staff with *herpetic whitlow* should be permitted to attend school if lesions are covered.

Reporting requirements: There is no requirement to report HSV infections (either type 1 or type 2) unless they occur in newborn babies.

Stop-spread guidelines

- Make sure that staff who may come in contact with blisters on students wear latex gloves during diapering or changing of a dressing.
- To control spread of *herpes gladiatorum*, educate athletes and trainers about the risk, conduct routine examinations before wrestling contacts, exclude wrestlers with suspicious lesions, and refer them for diagnosis and treatment. Sanitizing of mats with a dilute bleach solution (1 tablespoon bleach to 1 quart of water) and airing of mats is also recommended as a standard precaution.

Infectious Mononucleosis

Infectious mononucleosis is an acute illness caused by the Epstein-Barr virus. Its symptoms include sore throat, fever, and enlarged lymph nodes. It occurs most frequently in adolescents or young adults. While infants and young children can be affected by the disease, they frequently have no symptoms. Individuals with this disease

can experience symptoms ranging from no illness or mild illness to severe illness. Infection can occasionally be accompanied by a rash, especially in patients treated with ampicillin or amoxacillin. Most cases of infectious mononucleosis go away by themselves over 2 to 3 weeks. During the course of the illness, patients often have days when they feel well, alternating with days when they feel ill.

Transmission: Both children and adults can get infectious mononucleosis. The virus is spread from person to person through saliva. Young children may be infected by saliva on the hands of caregivers. Spread between children can also occur by sharing mouthed objects or toys that have infected saliva on them. Kissing can increase spread among young adults. Infectious mononucleosis is common in group settings of adolescents such as in schools. Spread may also occur via blood transfusions. The disease is not seasonal, and the shedding of the virus can occur for many months after infection. The incubation period is estimated to be 4 to 6 weeks, but the time an individual is contagious is unknown.

Diagnosis: The diagnosis of this illness is based on symptoms and laboratory blood tests.

Treatment: More than 95% of patients will recover without any treatment. Individuals with this disease can be as active as they feel they are able. Contact sports or heavy lifting should be avoided during the first 2 or 3 weeks of illness.

School attendance guidelines: Since the spread of the virus requires close contact, there is no need to exclude students or adults with this disease as long as they are feeling well. Proper hand washing measures should be in place to help prevent spread.

Sexually Transmitted Diseases (STDs)

Sexually transmitted diseases are transmitted when an infected person has unprotected sexual intercourse or other intimate physical contact with another person. Sexual intercourse includes when a penis is inserted into a vagina, as well as oral or anal intercourse. The most common sexually transmitted diseases include syphilis, gonorrhea (GC), chlamydia, warts (condyloma), herpes simplex, hepatitis B, and HIV infection. *Symptoms* may include the following: (For more detailed descriptions, refer to a standard infectious disease manual published by professional organizations such as the American Academy of Pediatrics or the Centers for Disease Control and Prevention.)

Syphilis: Painless sore most commonly on or around the penis, vulva, vagina, perineum, mouth, or anus, usually accompanied by enlarged regional lymph nodes. This is often followed within weeks to months by a rash over the body which is characteristic of secondary syphilis. Symptoms will subside even in the absence of treatment, but the infection will persist.

GC: For males, discharge or pain while urinating. For females, vaginal discharge, odor, or pain.

Chlamydia: For males, discharge or pain while urinating. For females, vaginal discharge, odor, or pain. May have spotting of blood after intercourse or between menstrual periods.



Warts: Wartlike growths on the genitals.

Genital herpes: Painful, pruritic sores on the genitals.

AIDS: Weight loss, night sweats, persistent sores, swollen lymph nodes, and sore throat, repeated and lingering infections. (For a discussion of HIV Infection and AIDS, see next section on Diseases Spread Through Blood Contact.)

Hepatitis B: Weakness, abdominal pain, nausea, vomiting, dark urine, jaundice. (For a discussion of Hepatitis B, see next section on Diseases Spread Through Blood Contact.)

People can be infected but be asymptomatic. This is particularly true for women. Even so, the dangers of these diseases persist, and they can still be transmitted. Anyone who thinks he or she has been exposed to an STD should see a health care provider immediately. Sexually active adolescents should be screened regularly for STDs. Infection with one STD may indicate the need to test for other STD infections.

Transmission: Individuals who have unprotected sex, especially with many partners, are at risk of exposure to STDs. Some STDs can also be transmitted directly from an infected person to another by sharing contaminated needles. Other forms of substance abuse (drinking, cocaine, etc.) increase the risk of exposure because they impair judgment. Some drugs, such as crack cocaine, may increase the sex drive, affect the number of partners and/or frequency of sex, thus increasing opportunities for unprotected sex with an infected person.

If untreated, STDs may cause serious physical and reproductive damage or even death. They are particularly dangerous to infants whose infected mothers are not treated during pregnancy. Infected infants may be born mentally retarded or physically deformed, or they may die. Infection with one STD indicates the need to test for other STD infections.

Prevention: Abstinence from sexual intercourse or intimate physical contact will guarantee protection against STDs. For those who are sexually active, condom use is a very important but not 100% guaranteed protection against being infected with an STD. Limiting the number of partners is important, as the chances of encountering an infected person increase with the number of partners.

Engaging in substance use may increase the chances of becoming infected. Thus, avoidance of substance use is critical to protecting against STDs. Addicts should be provided with detoxification and recovery services, as well as with education and tools to prevent the transmission of STDs and HIV/AIDS.

Diagnosis: A physical examination including inspection, blood tests and/or cultures will assist in diagnosis.

Treatment: Bacterial STDs (syphilis, GC, and chlamydia) can be treated with antibiotics administered either orally or by intramuscular injections. There are several local treatments (chemical, cryotherapy, laser) for treating warts. There are no cures for viral

infections such as hepatitis B, genital herpes or AIDS, although hepatitis B may resolve itself. Hepatitis B can be prevented with a vaccine. The symptoms of herpes may be treated with a drug called acyclovir.

An infected person may consult his or her own health care provider or the state health department-sponsored agencies which provide comprehensive STD services. These clinics, open to all, have highly trained and sensitive staff, and there are no restrictions to access based on age, race, sex, ethnicity, ability to pay, town of residence, country of origin, or whether or not the person is in the United States legally.

By law, state-contracted STD clinics diagnose and treat STDs. These clinics can treat minors without requiring parental consent. The Commonwealth also covers such services, making them free to minors. Private insurers are not notified by way of a bill, nor is a minor ever billed.

Reporting requirements: STDs are reportable directly to the state health department. For confidentiality purposes, such reports are *never* made to the local board of health. However, hepatitis B, which is also spread through blood contact, is reported to the local boards of health. The MDPH will not release the identity of any case, and releases data in aggregate form only so that no individual can possibly be identified. The success of educational programs and disease prevention activities depends largely on the community trusting that all personal information is kept confidential. (refer to Exhibit 8-1 for the list of sexually transmitted diseases reportable directly to the MDPH.)

DISEASES SPREAD THROUGH BLOOD CONTACT

Two serious viral infections are spread by contact with infected blood: *hepatitis B* and *HIV (human immunodeficiency virus) infection*, which causes AIDS (acquired immune deficiency syndrome). Several other infections such as syphilis and hepatitis C *occasionally* are spread by contact with infected blood as well.

The viruses that cause hepatitis B and AIDS can spread when blood that contains the virus enters the bloodstream of another person. This can happen through the accidental or intentional puncture of the skin by a contaminated needle. Spread can also occur if infected blood comes in contact with a broken surface of skin or of mucous membranes such as the inside lining of the mouth, eyes, nose, rectum, or sex organs. These infections can be passed on by an infected mother to her newborn infant. Hepatitis B and HIV infections are also sexually transmitted diseases.

Once these viruses enter the body, they may stay for months or years, even if the person appears healthy. They can be spread by such a person, called a "carrier", even if the person is not sick. These infections are much more difficult to "catch" or to transmit from one person to another than any of the other diseases discussed in this chapter.

General measures for the prevention of these diseases are the same as those for other diseases caused by direct contact:



- Because it is not always possible to know when someone is infected with germs spread by blood contact, all blood and body fluids (drainage from open skin lesions such as eczema or impetigo, sexual fluids, and saliva contaminated with blood) should be treated as infectious.
- Because any blood can potentially contain these two viruses, all blood spills and blood-contaminated surfaces should be cleaned and disinfected with a solution of 1 tablespoon bleach per 1 quart of water.
- Disposable latex gloves should be used when contact with blood or blood-containing body fluids is anticipated, particularly if hands have open cuts or abrasions, or when surfaces have been contaminated with blood or other body fluids.
- Hands should be washed thoroughly after exposure to all blood or body fluids, including occasions when gloves are used.

Hepatitis B

Hepatitis B is an infection of the liver. Symptoms of infection include fever, loss of appetite, nausea, abdominal pain and light-colored stools, jaundice (yellowing of the skin and whites of the eyes and dark-colored urine). Occasionally, pain in the joints and a hive-like skin rash. Illness can range from infection without symptoms, to mild symptoms without jaundice, to severe illness with jaundice, to the very rare event of rapid liver failure and death. As with hepatitis A infection, young children are less likely to be jaundiced or show symptoms of illness. Approximately 50% of adults will be symptomatic, with one-quarter being jaundiced.

Unlike hepatitis A infection, hepatitis B can cause chronic infection with persistent “shedding” of the virus into body fluids including blood in up to 10% of those infected. The younger the age of infection, the more likely an infected individual is to become a carrier. Individuals with such chronic infections are virus “carriers” and remain infectious for years, sometimes for life. Such individuals can develop chronic liver disease. Cirrhosis with liver failure, and liver cancer can occur years after infection. An infected mother can pass on the infection to her newborn infant. Up to 90% of infants born to infected mothers will become infected themselves. Although such infants often show no obvious symptoms of hepatitis B, they have a high likelihood of becoming carriers.

Transmission: Individuals who have not been previously infected with hepatitis B and have not been vaccinated are susceptible to hepatitis B. Unlike hepatitis A (which is spread through infected stool), hepatitis B is spread when blood or body fluids containing the virus get onto broken skin or onto mucous membranes inside the mouth, eyes, rectum, or genital tract. Hepatitis B infection, therefore, is quite difficult to pass from one person to another.

Although the virus has been found in almost all body fluids, only blood, genital fluids, and, to a lesser extent, saliva have been found to be infectious. Virus spread requires contact with the infected fluid through the skin (needle stick, contamination of a cut, blood transfusion) or through a broken mucous surface (as might occur

during sexual contact or shared salivary contact). Environmental transmission from contaminated surfaces, such as sharing toys that children put in their mouths, is possible but unlikely.

Infection with hepatitis B is most common in individuals who have contact with other people's blood such as health care providers or laboratory technicians who may accidentally puncture their skin with a blood-contaminated needle, or intravenous drug abusers who share needles. Individuals who have hepatitis B can spread the infection to their sexual contacts via contact with infected genital tract fluids. Infants born to mothers with hepatitis B infection are at high risk of becoming infected unless they are vaccinated at birth. Adolescents who live in areas where there are increased rates of parental drug abuse, teenage pregnancy, and sexually transmitted diseases are at increased risk for hepatitis B infection. In addition, spread of infection in a household setting may occur in situations where there is continuous sharing, over a long period of time, of personal items such as toothbrushes or razors that may be contaminated with infected blood.

Spread of hepatitis B in schools is rare. The risk of spread is higher from an infected person with behavioral and/or medical problems such as biting behavior that draws blood or oozing skin sores. These behaviors may increase the possibility of transfer of infected fluid. Because an individual who is a carrier may not have signs of illness, *hand washing after any contact with blood or body fluids is the best preventive measure*. If hepatitis B were to spread in a school setting, it is most likely to occur through direct blood contact via bites or scratches that break the skin and allow the virus to enter the bloodstream of a noninfected person. Because saliva contains much less virus than blood, the potential to spread the virus by saliva is much lower than through blood.

Diagnosis: Hepatitis B infection is diagnosed with a blood test.

Treatment: Usually the body's defense system successfully fights off the infection, and the individual becomes immune. However, medical follow-up is important to monitor for complications and the occurrence of chronic infection. Interferon has been recently approved for treatment of some forms of chronic hepatitis.

Primary prevention: A safe and effective vaccine to prevent hepatitis B is available and given in three doses over 6 to 18 months. Hepatitis B vaccine is now recommended for *all* infants and, as of Fall 1996, will be required for entry into kindergarten for children born since January 1, 1992. Older children and adolescents at increased risk of hepatitis B infection also should be immunized.

Risk of exposure to hepatitis B in a school setting is not considered high. Even when there is a known carrier in a school setting, vaccination is not considered necessary for children or staff in contact with hepatitis B carriers unless specific risk factors noted above are present.

Studies have shown that staff of residential programs for the developmentally disabled have a risk of infection comparable to that of health care workers and therefore vaccination is recommended. In



a nonresidential setting, the risk of infection for other students appears to be lower than that for staff. However, to reduce the risk of infection, vaccination may be recommended for students in such settings. If a classmate who is a hepatitis B carrier behaves aggressively or has special medical problems (such as exudative dermatitis or open skin lesions) that increase the risk of exposure to his or her blood or serous secretions, vaccination of contacts is strongly recommended.

Hepatitis B vaccine is required by the U.S. Occupational Safety and Health Administration (OSHA) for all non-public employees who may come in contact with blood or body fluids during the performance of their job. In some states, including Massachusetts, OSHA regulations do not apply to city, town, or state government. As of December 1994, there is no mandate in Massachusetts which requires city and town governments, as employers, to comply with OSHA guidelines.

Nevertheless, the OSHA guidelines serve to define the standard of practice. To the extent that the guidelines are not followed, and the failure to comply results in transmission of a bloodborne illness, there is a significant risk of liability. Accordingly, it seems highly advisable for cities and towns to comply with all pertinent provisions of the guidelines in order to properly safeguard their employees and reduce the risk of liability. *Employers or employees of cities and towns concerned with liability should consult their own legal counsel.*

Secondary Prevention: If an individual is known to have been exposed to hepatitis B, such as by a needle stick, a bite that has drawn blood, or sexual contact with an acutely infected person, a special immune globulin, given by injection soon after exposure, can prevent infection. If the exposed person has not already been vaccinated, it is recommended that the vaccine series be given following the immune globulin injection.

Because it is unlikely that a bite from a person whose hepatitis B status is unknown will result in transmission, testing either the biter or the victim is not necessary. In addition, risks from these types of exposures will decrease as more and more children are routinely vaccinated against hepatitis B.

School attendance guidelines: Adults and children ill with hepatitis B should stay home until they feel well and symptoms such as fever and jaundice are gone. A staff member or student with chronic hepatitis B infection who has open, oozing sores that cannot be covered should not attend the school until the skin sores are healed. Therefore, unless a staff member or student has uncovered open, oozing sores, there is no reason to exclude such a person from employment or attendance after recovery from acute infection.

Based on all research at this time, the risk of disease spread in a school setting is considered very low and neither justifies exclusion of a hepatitis B carrier nor routine screening of children prior to enrollment. Admission of a known hepatitis B carrier with specific risk

factors such as biting, frequent scratching, generalized open skin rashes or sores, or bleeding problems should be assessed on a case-by-case basis by the child's physician, the school, and responsible public health authorities.

Reporting requirements: A case of *Hepatitis B* (acute disease or carriage) is reported to the local board of health.

Notification guidelines: Parents should be encouraged to inform the school nurse about a student who is a known hepatitis B carrier to allow for proper precautions and assessment of behavior issues which could facilitate transmission. MDPH will provide consultation as needed. Parents of other children attending the school do not need to be informed.

Stop-spread guidelines

Whether or not individual hepatitis B carriers have been identified, it is important that all school staff receive regular training on the prevention of bloodborne disease. All students should receive age-appropriate instruction regarding the potential dangers of contact with the blood and other body fluids of other individuals. Some standard precautions include:

- Follow all procedures for hand washing and cleanliness at the school.
- Always treat all blood as a potentially dangerous fluid — carefully observe *universal precautions*.
- Do not permit sharing of personal items that may become contaminated with blood or body fluids such as toothbrushes, eating utensils, or any other object that may be mouthed.
- Cover open skin lesions.
- Place disposable items contaminated with blood or body fluids in plastic bags in covered containers.
- Store clothing or other washable items stained with blood and/or body fluids separately in a plastic bag, and send them home with the owner for appropriate cleaning. Clothing stained with blood or other body fluids should be washed with hot water in a regular cycle wash.
- Wash and sanitize surfaces of toys contaminated with blood or body fluids with a dilute solution of 1/4 cup chlorine bleach in 1 gallon of water freshly made up on a daily basis or disinfect objects by boiling them for 10 minutes.
- Discourage aggressive behavior (biting, scratching) at the school and supervise closely to avoid these behaviors.
- Provide age-appropriate education to adolescents and young adults about sexuality and the means of preventing hepatitis B transmission.
- If there is a specific infectious exposure to a person with hepatitis B (such as a bite that causes bleeding), contact the local board of



health and a health care provider for immediate advice; the exposed person may need to receive a preventive immune globulin injection and the vaccine series.

HIV Infection and AIDS

AIDS (acquired immunodeficiency syndrome) is a serious disease of the immune system. Currently, there is no cure, and it is almost always fatal. AIDS is caused by the human immunodeficiency virus (HIV) and is transmitted by the exchange of blood, semen, vaginal fluids, or breast milk from an infected individual to an uninfected individual. The virus attacks the immune system, crippling the body's ability to fight off diseases caused *by common organisms* that normally exist in the environment.

It is not unusual for an infected person to feel healthy for a very long time, sometimes up to or beyond 10 years after infection. During this period, however, an infected individual can still transmit the virus to other people even though he or she is symptom-free and looks and feels healthy.

In time, an HIV-infected person may develop symptoms that a physician may determine to be HIV-related. Such symptoms signal the serious deterioration of the immune system, and, at this point, an infected individual is diagnosed with symptomatic HIV disease. He or she still may not have a diagnosis of AIDS. It is only when an individual displays signs of very severe immune deficiency and/or one of a set of very specific clinical conditions that he or she is diagnosed with AIDS. Only a trained health care professional can make such a diagnosis.

AIDS is the only major disease in the United States for which mortality is increasing. It is the seventh leading cause of years of potential life lost before age 65 in the United States and the seventh leading cause of death for males and females aged 15 to 29. Furthermore, it is the number one cause of death for males aged 15 to 44. In Massachusetts, AIDS is now the most common cause of death in men between the ages of 25 and 44 and second most common in women in that age group.

By December 1993, 5,228 children in the United States ages birth to 13 years had been reported with AIDS; most were infected before or during birth. Many more children are HIV-infected and have not developed AIDS.

In May 1993, the Children and Family AIDS Task Force report, *HIV/AIDS in Children and Families in Massachusetts: Recommendations for Policy and Program*, was issued to the Massachusetts legislature. It reported that an estimated 400 to 500 children under 13 years of age and 1,500 adolescents (ages 14 to 24) had contracted HIV in the Commonwealth.

A much smaller number of children and adolescents in Massachusetts (fewer than 200) have been diagnosed with AIDS. However, because of the lengthy period during which an individual can be infected with HIV and not have symptoms, the number of AIDS diagnoses is not the best indicator of the scope of the epidemic in young people.

In Massachusetts, where an estimated 1 in every 200 people is HIV-infected, nineteen percent of diagnosed AIDS cases occur in the age range of 20 to 29 years, many of whom were infected with HIV in their teenage years.

Transmission: HIV can be transmitted from one person to another in the following ways:

- Blood-to-blood contact, such as sharing drug injection needles (including for steroids), ear piercing and tattooing *if* a needle is shared, use of a needle stick, any contact between blood and an open cut or sore, or getting a transfusion with infected blood products. In North America, due to the screening of the blood supply, transfusion-related transmission is now extremely rare.
- Unprotected sexual intercourse, including anal intercourse (regardless of the gender or sexual orientation of the partner), vaginal intercourse, or oral intercourse. HIV is transmitted through semen (including pre-ejaculatory fluid), vaginal fluids (including menstrual blood, cervical discharge and the natural fluids that lubricate the vagina), and blood.
- From a pregnant or birthing woman to her fetus (maternal-fetal transmission) at or before birth, and in some cases to newborns through breast feeding.

HIV is *not* transmitted through casual contact, such as kissing or hugging and there are no confirmed cases of HIV transmission involving saliva, sweat, or tears. HIV is also *not* transmitted by:

- Being bitten by mosquitoes or other bugs.
- Being bitten by an animal.
- Eating food handled, prepared, or served by a person with HIV infection.
- Sharing toilets, telephones, or clothes.
- Sharing forks, spoons, knives, or drinking glasses.
- Touching, hugging, or kissing a person with HIV infection.
- Attending school or other public places with HIV-infected people.

Diagnosis: The HIV antibody test is not a test for AIDS but rather a test to determine the presence of HIV antibodies in the blood. The HIV antibodies form in response to the presence of HIV virus. Thus, the HIV test detects the antibody, not the virus itself. But presence of the antibody is indicative of active infection, not just exposure. By Massachusetts law, HIV testing requires *written, informed* consent and cannot be done as a *routine* blood test.

Currently, there are two tests to detect HIV antibodies: the ELISA (enzyme linked immuno- sorbent assay) and the Western blot. The ELISA is typically performed first. If the ELISA is positive, it is repeated twice. If any two of the three tests are positive, a Western blot test is done. When a positive ELISA is confirmed by the Western blot, both HIV antibody tests provide accurate results more than 99% of the time.



The HIV antibody can be detected in most infected individuals within 3 weeks to 6 months from the time of initial infection. The presence of antibody is always considered evidence of active infection. If an HIV antibody test is negative, no antibodies were found and the person does not have antibodies *at the time of the test*. Individuals should be retested in 3 to 6 months and should refrain from all risky behaviors to be sure of their *sero-negative* status. This is also a precaution against transmission of the virus should they convert to sero-positive during this period since persons may be infectious before they convert to positive.

Testing HIV negative today does not mean permanent immunity from infection if an individual engages in risky sexual behavior or injection drug use. Even after a negative test, an individual who puts himself or herself at risk may become infected with HIV.

Adolescent HIV counseling and testing: The MDPH HIV/AIDS Bureau issued its *Adolescent HIV Counseling and Testing Policy* in December 1990. This policy recognizes that adolescents may put themselves at risk for HIV infection through specific sexual and injection drug use behaviors. The policy recommends that medical professionals do the following:

- complete a psychosocial history before proceeding with antibody testing,
- assist the adolescent in identifying an appropriate individual (or identify an individual if the youth cannot do so) to be supportive before, during, and after the testing process,
- conduct multiple confidential pre- and post-test counseling sessions, and
- ensure that counseling sessions are sensitive, culturally specific, and developmentally appropriate.

Under the provisions of state public health law (M.G.L. c. 112, s. 12F) minors may consent to their own dental care and medical testing and treatment in certain circumstances, including HIV infection.¹ This law mandates confidentiality of medical information and records except when an attending physician or dentist reasonably believes that the condition of the minor is so serious that the minor's life or limb is endangered. If a young person chooses not to inform his or her parent(s) or guardian(s) about their test results, they are within their rights to do so.

¹ State law, M.G.L. c. 112, s. 12F permits emergency examination and treatment of minors without parental consent and permits a minor to consent to medical or dental care if:

- married, widowed, or divorced
- the parent of a child
- a member of the armed services
- pregnant or believe herself to be pregnant
- living separate and apart from parents or legal guardian and managing his or her own financial affairs
- reasonably believe himself or herself to have come in contact with or suffering from a dangerous disease, as defined by the MDPH, and seeking diagnosis or treatment.

Treatment: Because early diagnosis, counseling, and treatment may improve the length of life for some and can improve the quality of life for individuals with HIV, it is important for those who may be infected to be evaluated by their physician as early as possible. If medical care and immune system monitoring begin soon after infection, medical treatment can be provided that can help individuals with HIV avoid contracting severe infections. Consistent, quality health care from a licensed health care provider is essential. The ACT NOW program provides free medical care for persons with HIV who are uninsured or underinsured.

There now are many approved drugs for the treatment of opportunistic infections associated with HIV infection, several approved drugs that attack the virus itself, and some medical interventions in the developmental stages that may improve the immune systems of people with HIV infection, thus delaying or preventing many opportunistic infections. In Massachusetts, financial assistance is available for those who are unable to afford the cost of many drug treatments. Individuals with HIV should contact a health care provider to obtain information about or access to any treatment options.

HIV/AIDS prevention and risk reduction. HIV infection is preventable. MDPH recommends the following protective measures:

- The only sure way to prevent *sexual* transmission of HIV is through abstinence from sexual intercourse.
- Individuals should *think* and *talk* about HIV and other STD prevention *before* deciding whether or not to have sex.
- Sexual behaviors that do not involve the exchange of sexual body fluids may reduce risk of exposure to HIV. Examples of nonintercourse sexual behavior include kissing, hugging, and massage.
- In the case of anal or vaginal intercourse, or oral sex, a *latex* condom should be used properly every time. *Condoms are not reusable*. Water-based lubricants such as K-Y, For-Play, or spermicidal gel are acceptable in conjunction with condom use. Vaseline, grease, or oils should not be used because they cause breakdown of latex condoms.
- During sexual activity, contact with semen, vaginal fluids, or blood should be avoided.
- The use of alcohol and other drugs which impair judgment should be avoided because they may lead to unsafe sexual practices.
- Abstain from injection drug use; it is a major method of HIV transmission.
- If drugs are injected, needles or works including cotton, syringe, and cookers should *never* be shared. Use only new needles and syringes or needles and syringes cleaned with full-strength bleach and rinsed several times with water. Counseling regarding substance abuse and drug addiction rehabilitation is strongly advised.



- Women considering pregnancy should seek counseling to determine their HIV status, risk of exposure and any potential risks for their children.
- There are ways to prevent HIV infection. To learn more about condom use and other protective measures, contact the Massachusetts AIDS Hotline: (800) 235-2331.

Youth at risk may need to face both their own fears and anxieties regarding HIV as well as the responsibility of caring for family, friends, or other loved ones who are infected or affected by HIV. Because HIV infection is very personal and emotionally challenging, education about HIV/AIDS prevention and infection control protocols should be provided for all staff. School policy should be sensitive and supportive of students and school personnel who may be infected or affected by HIV.

Schools and HIV/AIDS prevention education: Comprehensive health education is an effective means of preventing HIV infection. In 1992 the Massachusetts Department of Public Health issued the *Comprehensive Curriculum Guidelines on HIV/AIDS: Grades K-12* which outlines comprehensive health education regarding HIV infection, provides information, and suggests ways to develop negotiation skills and bolster self-esteem. Teachers, parents, nurses, school administrators, community leaders, and youth workers play vital roles (see Chapter 3 for more information.).

The Massachusetts Board of Education policy on AIDS/HIV prevention education includes an addendum regarding condom availability in schools. It recommends that every school committee, in consultation with superintendents, administrators, faculty, parents, and students, consider making condoms available in their secondary schools. *AIDS/HIV Infection Policies for Early Childhood and School Settings*, published by the MDPH and MDOE in 1993, lists additional recommendations under the *Addendum to AIDS/HIV Prevention Education Policy*.

MDOE and MDPH, through the Protect Teen Health campaign (a comprehensive, multidimensional HIV/STD, unwanted pregnancy, and substance abuse prevention campaign) provide educational materials and offer workshops for staff who counsel high-risk youth.

In addition, school districts may develop HIV/AIDS policies and programs in accordance with the Massachusetts *AIDS/HIV Infection Policies for Early Childhood and School Settings*. Because of the need for community participation on this important topic, it is recommended that a school district establish a school-community task force to advise and educate regarding local and/or potential HIV/AIDS issues. For assistance in training and policy development, call the MDPH AIDS Bureau.

AIDS/HIV education among Massachusetts students: The 1993 Massachusetts Department of Education Youth Risk Behavior Survey, published in 1994, reported that 90% of students responding to the survey indicated they had been taught about AIDS/HIV infection in school, a level significantly higher than that found in

1990 (78%). The percentage that had been taught about AIDS/HIV infection in school was slightly higher among ninth graders than among twelfth graders which suggests that the number of students who receive HIV/AIDS education is increasing. While these findings are encouraging, it is known that the content of HIV/AIDS education varies considerably from school to school and may or may not include specific information or instruction on methods of actually preventing or reducing the risk of HIV infection.

More than half (59%) of students surveyed indicated having talked about AIDS/HIV infection with their parents or other adults in their family. The 1993 results also indicate that more adolescent females than adolescent males reported having spoken with their parents or other adults in their family about this topic. However, as with school-based AIDS/HIV education, these data do not reveal the content of parent-child communication about AIDS/HIV, and the degree to which prevention is discussed remains uncertain.

The results of the survey as well as those of other national research underline the importance of providing HIV prevention education before the ninth grade and of ensuring that prevention messages continue to be provided to students throughout their high school years.

School attendance guidelines: Students with AIDS or HIV infection pose no risk of transmission of HIV infection through the kind of casual contact that typically occurs in a school setting. In August 1991, MDPH issued an updated medical policy stating that students with AIDS/HIV infection have the same right to attend classes or participate in school programs and activities as any other student. The only exception is in a very rare set of situations where a student chronically bleeds uncontrollably. In such a case, the student should not have routine contact with other individuals in a school setting. Universal blood and body fluid precautions should apply as a public health measure. MDPH's *AIDS/HIV Infection Policies for Early Childhood and School Settings, Appendix A*, lists conditions which are grounds for the exclusion of a student from a school setting, *regardless of whether he or she is known or suspected to harbor a bloodborne infection* (MDPH/MDOE, 1991).

Disclosure and confidentiality: No one except the student and/or the student's parent(s) or guardian(s) necessarily needs to know of a student's AIDS diagnosis or HIV infection. They are not obligated to disclose this information. As with any other medical information, the diagnosis of AIDS is confidential. Since individuals with AIDS or HIV infection typically pose no public health threat to others by their presence in the school, their medical information must be treated in a very confidential manner.

The privacy of students with HIV or AIDS is protected under the general state privacy law (M.G.L. c. 214, s. 1B) which protects against unwarranted invasion of privacy, and also by M.G.L. c. 111, s. 70F which prohibits health care providers and facilities (including school-based clinics) from disclosing HIV test results (or the fact that a test has been performed) without a specific, informed, written consent of the person who has been tested.



If a health care provider or facility discloses a student's HIV antibody test result without specific, informed, written consent, that provider or facility violates state law (M.G.L. c. 111, s. 70F) and possibly faces a civil suit brought by the student or the student's parent(s) or guardian(s). Other school staff may be held liable for violating the privacy of an AIDS- diagnosed or HIV-infected student under the general privacy law and may be open to being sued by the student or the student's family.

Reasons to Disclose: There are several medical reasons that a student and/or his or her parent/guardian may wish to disclose the diagnosis to the school nurse or school physician, even though they are not obligated to do so:

- A student who is diagnosed with AIDS or presents evidence of having the HIV virus may be at a greater risk of contracting infections. If there is an occurrence of a contagious disease in school such as chickenpox or influenza, the school nurse or physician who is aware of a student's HIV status may be able to alert the student's parent(s) or guardian(s), who then may consult their personal care physician for preventive treatment or a recommendation to keep their child at home.
- A young person with AIDS or HIV infection may be taking medications that should be administered by a health care professional, or he or she may require immunizations (vaccines) different from those of other students. Schools are bound by state law to manage certain medications taken in school (M.G.L. c. 71 s. 54B) and to determine whether a student has had certain immunizations. (See first section in this chapter on immunization requirements.) Therefore, parents may decide that knowledge of an AIDS diagnosis or HIV infection will help the school nurse or school physician meet the child's medical needs.

If the parents or guardians, in consultation with the student's primary care physician, decide to inform certain school personnel, particularly the school nurse and school physician, about the student's AIDS/HIV status, the MDOE recommends the following guidelines for disclosure:

- The student's parent(s) or guardian(s) or the students themselves, under certain circumstances, may inform the school nurse or school physician directly.
- The student's parent(s) or guardian(s) may request that their child's personal care physician make the disclosure. In this case, specific, informed, written consent of the student's parent(s) or guardian(s) is required before the physician may disclose the information.
- Further disclosure of a student's HIV status by the school nurse or school physician to other school personnel requires the specific, informed, written consent of the student's parent(s) or guardian(s).

Note that a student and the student's parent(s) or guardian(s) may also decide to inform the student's teacher(s), counselor, school

principal or other staff members, but they are not obliged to do so. This is *their* decision alone. Given the privacy protection of M.G.L. c. 214, s.1B, all school personnel are under a similar duty to protect the confidentiality of the information.

If and when informed, written consent is obtained which enables school staff to disclose to others in the school, the form or letter giving this consent should spell out specifically which individuals should be told. It should specify the *names* of individuals, not their titles or roles in the school. Staff titles and positions change, and a student's family may not want a new person holding the position to be informed.

Privacy of Records: Because licensed physicians, nurses, social workers, and psychologists (according to M.G.L. c. 111, s. 70F as well as c. 112, s.135A and c. 112, s.129A) have a duty to protect AIDS/HIV-related and other private information, the signed consent form and any HIV/AIDS-related information should be kept by the school nurse in a locked file separate from the school health records. It is recommended that the information be placed in a folder that specifically states on the outside who has written permission to view it, since the folder itself contains sensitive information. The locked file should be separate from the school health records because these records are routinely accessible to school staff who deal with the student. (School psychologists, social workers, and other professionals may also keep private notes of their sessions with students, storing them in a locked files.)

NONCONTAGIOUS INFECTIOUS DISEASES

Some infectious diseases caused by bacteria viruses, fungi, or parasites are not easily spread from person to person. One such non-contagious infection, otitis media (middle ear infections), occurs frequently in young children.

Otitis media (Middle Ear Infection)

Otitis media is an infection of the part of the ear behind the eardrum. There is a small passageway (the eustachian tube) from inside the throat to the middle ear. Bacteria and/or viruses can travel from the throat area through the eustachian tube to the middle ear and cause an infection. When infection occurs, pus develops, pushes on the eardrum, and causes pain and often fever. Sometimes the pressure is so great that the eardrum bursts, and the pus drains out into the ear canal. Although this can frighten a parent, the child feels better, and the hole in the eardrum will heal.

Untreated ear infections can spread to the mastoid bone just behind the middle ear and cause mastoiditis. Before antibiotics were available for treatment, mastoiditis was a serious problem. Today the biggest problem from otitis media is the potential for hearing loss. Fluid may remain in an ear for as long as 6 months after an infection is gone, a condition called serous otitis media.

Transmission: Middle ear infections are common in children between the ages of 1 month and 6 years and most common before age 3 years. Some children develop ear infections a few days after a cold starts. Some children have one infection after another; others



never have any. The tendency to have infections typically runs in families. The bacteria and viruses that cause otitis media start out in the throat. About half of the cases of otitis are bacterial and about half viral. It is impossible to tell which germ is causing the infection without inserting a sterile needle through the eardrum, pulling out some of the pus or fluid, and culturing it. This is somewhat difficult and done only for special reasons. In general, all middle ear infections are treated with antibiotics as if they were bacterial.

School attendance guidelines: Because ear infections themselves are not contagious, there is no reason to exclude students.

Special care notes for students with frequent ear infections

- Never use cotton swabs and never put anything smaller than a finger into a child's ear. Do not allow the child to do so either.
- Be especially alert for any sign of hearing or speech problems. Refer the child to the family's health care provider or other community resources.

Special care notes for students with ear tubes

- An ear tube creates a hole in the eardrum so fluid and pus may drain out and fluid will not build up. It usually stays in for 3 to 6 months.
- Since pus can drain out, water from the outside (that has germs in it) can also run into the middle ear easily. Therefore, students with tubes must be very careful not to get water in their ears. This usually means no swimming unless there are special earplugs provided and permission to swim obtained from the primary care provider.
- Watch for any sign of hearing or speech problems.

DISEASES SPREAD FROM ANIMALS TO PEOPLE (ZOOSES)

Diseases spread from animals to people are called *zoonoses*. Some foodborne and waterborne diseases discussed earlier in this chapter that may be traced to disease in animals are salmonellosis, campylobacteriosis, and giardiasis. The two diseases discussed in this section are rabies, in which person-to-person transmission has not been documented, and tickborne diseases, which are known not to be transmitted from person to person.

Rabies

Rabies is a viral disease of the central nervous system (brain and spinal cord) that is almost always fatal. It can affect any mammal, including humans. Animals with rabies often behave strangely after the virus attacks their brains. Rabid animals may attack people or other animals for no real reason, or they may lose their fear of people and seem to be unnaturally friendly. Not all rabid animals act this way; some may act normally.

Transmission: All mammals, including humans, can get rabies. Worldwide, there are over 20,000 human deaths per year from rabies. In Massachusetts, as in all other areas with rabies, the risk to children is of special concern because children are bitten more

frequently by animals and they may not be reliable reporters of their own exposure.

Although there are only a few human deaths from rabies in this country, the risks of exposure to rabies are increasing with the spread of rabies in wildlife. At present, there are major outbreaks in the United States among skunks, foxes, bats, and raccoons. *An outbreak of rabies in raccoons spread into Massachusetts in 1992 and has been documented in most towns and cities across the state.*

Raccoons and bats are the species most commonly affected by rabies in Massachusetts; however, rabies does spill over into other wild and domestic animals such as skunks, foxes, and woodchucks. Cats, dogs, bats, and livestock also get rabies and can spread it to people if these animals do not have special shots to protect them. Free-roaming dogs and cats have a high risk of encountering rabid raccoons. Rabies is very rare among small rodents like squirrels, rats, mice, and chipmunks. Birds, fish, snakes, lizards, turtles, and insects *cannot* spread rabies.

The rabies virus lives in the saliva and other tissues of infected animals and is spread when the infected animal bites or scratches another animal or human. The virus can be spread if saliva or infected tissues touch broken skin or a mucous membrane (lining the mouth, nose or eyes). Rabies is not usually spread through the air.

Diagnosis: Rabies is diagnosed in animals through testing a sample of brain tissue after they are dead. In humans suspected of having rabies, special tests are done on the blood, spinal fluid, and brain.

Reporting requirements: All animal bites should be reported to the local board of health and local animal control official. Dogs and cats that bite people must be observed for 10 days for signs of rabies.

Notification guidelines: When a student is bitten or scratched by any animal, school personnel should notify the student's parents and the local board of health. Parents should be advised to contact a physician for evaluation of the exposure. When necessary they may consult with MDPH.

Prevention: There is an effective vaccine for dogs, cats, and certain other domestic animals to prevent them from getting rabies. Pets serve as a bridge between wild animal rabies and humans, and should be vaccinated.

Since rabies is transmitted by infected animals, people and pets should avoid exposure to wild and stray animals. Prompt medical attention should be sought if they are bitten, scratched or otherwise exposed to stray or wild animals. There is also a very safe and effective series of rabies vaccines for people who are exposed. *Students and staff receiving the series of rabies vaccines for a rabies exposure should not be considered potentially infectious.*

Prevention guidelines:

- Avoid contact with wildlife and strays.
- If a sick or strange-acting animal is noticed around the school, the local animal control official should be called immediately for assistance.



- If anyone is bitten or scratched by any animal, wash the wound immediately with warm, soapy water for 10 minutes and contact a physician and the local board of health. Children should be taught that if they are bitten or scratched by an animal, they should wash the wound immediately and contact a parent, teacher, or other responsible adult immediately.
- If a student is bitten or scratched by any animal, school personnel should administer the proper first aid and notify the school nurse, the student's parents and the local board of health. Advise the parents to consult with a physician or emergency room for evaluation of the exposure.
- Vaccinate cats and dogs against rabies, and do not allow pets to roam free.
- Discourage wild animals from depending on humans for food and shelter. Fasten trash can lids tightly. Cap chimneys (common nesting sites for raccoons) and seal openings into houses, barns and garages.
- If a pet has been bitten or scratched by any other animal, wash the wounds promptly with soap and water. *Gloves should be worn to avoid potential exposure to infected saliva or tissue.* A veterinarian should be contacted.
- Animal control officials, veterinarians and their assistants, and others who have frequent contact with strays or wildlife should consider getting routine rabies vaccinations as a precautionary measure against exposure to the virus.

A rabies prevention curriculum and informational poster distributed by MDPH is available to all schools in the Commonwealth (see Chapter 3).

Tickborne diseases

Several diseases are spread to people by the bite of an infected tick.

Lyme disease (LD) is caused by a bacteria and is spread to people by a tiny deer tick. Symptoms can begin with a skin rash characterized by large, red, doughnut-shaped welts. Other symptoms are similar to those of flu: headache, fever, chills, muscle aches, and stiff neck. Symptoms generally appear from 1 to 3 weeks following a tick bite. Some patients, even if untreated, will recover from Lyme disease without complications. However, approximately half of all LD patients develop a chronic form of the disease and have repeated episodes of painful swelling in the joints. In rare cases, Lyme disease sufferers may develop facial paralysis or heart problems. Early diagnosis is important. If patients are treated early with appropriate antibiotics, this disease can be a mild illness, and later complications can be avoided.

Rocky Mountain spotted fever is carried by the large and more readily seen dog tick. Symptoms usually begin with a rash, appearing first on the wrists and ankles and spreading to other parts of the body. Other symptoms, including a high fever, chills, and severe headache, usually appear 3 to 10 days after tick bite. The disease can be effectively treated with antibiotics.

Transmission: Anyone who is bitten by an infected tick can get either of these two diseases. Ticks are most commonly found in bushy, wooded, or tall grassy areas. They are not found on open sandy beaches but can be found in the brush or grass near beaches. The deer tick is very small no larger than the size of a period on a printed page. During the deer tick's life cycle, it may feed on an infected animal, usually a mouse. In later stages of the cycle, it clings to vegetation and is spread by direct contact to the skin of a passing animal or person. The bite of the tick can then spread the bacteria to the new host. The greatest chance of being infected is while walking barelegged through brush or tall grass from May through August. *Not all ticks carry Lyme disease or Rocky Mountain spotted fever. Thus, a tick bite does not necessarily mean that disease will follow, and prompt removal of a tick will lessen any chance of disease transmission. Presumptive treatment with antibiotics, after a tick bite but before symptoms develop, is not recommended.*

Diagnosis: Diagnosis of Lyme disease is based primarily on recognition of the typical symptoms such as the characteristic skin rash. Atypical cases, or cases with only later-stage complications of LD (perhaps no rash appears), are difficult to diagnose. A blood test searching for antibodies to the bacteria is often helpful. The diagnosis of Rocky Mountain spotted fever is based on typical symptoms and can also be confirmed with a blood test.

Treatment: Oral antibiotic treatment is helpful early in the illness and often prevents late complications.

School attendance guidelines: There is no need to exclude either students or adults.

Reporting requirements: A diagnosis of Lyme Disease, Rocky Mountain spotted fever, or other tickborne illness must be reported to the local board of health.

Notification guidelines: If a tick-borne disease has occurred, the school nurse and school physician, collaborating with the local board of health, should determine whether some or all parents and staff should be notified so that they will watch for ticks as well. Prior to parent notification, it should be discussed with the school administrator.

If a student is bitten by a tick during the day, remove it as outlined below. Notify the parents of that student so they can inform their health care provider. Tell them what the tick looked like. If the student develops the symptoms described, particularly a skin rash and/or flu-like symptoms, ask the parents to see a health care provider promptly for evaluation and treatment.

Prevention Guidelines

- When you spend time outdoors in areas with ticks, wear long-sleeved shirts and long pants. Keep shirts tucked securely into pants and pant legs tucked tightly into socks. Wear sneakers or hiking boots instead of open sandals. Wear light-colored clothing. (Ticks are dark in color and will be easier to see against a light background.)



- Conduct daily tick checks. Ticks removed within 24 hours of attachment are unlikely to transmit Lyme disease. Ticks are most often found on the thigh, flank, arms, underarm, and legs, and are very small. Look for new “freckles.”
- If you find a tick, remove it *immediately*. Deer ticks are very small and hard, about the size of a pinhead. They are orange-red or black depending on their stage of growth, and prefer to attach themselves to a human host under the hair. Dog ticks are larger, ranging from 1/10 to 1/4 inch in length. They are brown and also prefer to attach themselves under the hair or on protected parts of the body. To remove a tick, use tweezers to grip the tick body firmly by the mouth parts and pull it straight out. If using fingers, place a protective covering between your fingers and the tick, and wash your hands afterward. Wash the bitten area with soap and water.

Insect repellents containing DEET can be effective against ticks but should be used cautiously. The pesticide permethrin is available as a clothing spray; *it is not to be used on the skin*. A combination of DEET and permethrin-treated clothes may provide the best protection against tick and mosquito bites. Follow these guidelines:

- Use repellents no more than one to two times per day. Do not treat skin under clothing.
- Particularly with children, avoid using high concentrations of DEET products. *Never* use on damaged skin.
- Avoid inhaling the product. Keep out of eyes, and do not apply to parts of children’s hands that are likely to have contact with their eyes or mouth.
- After returning indoors, wash treated skin with soap and water.
- If you suspect that a child is reacting to an insect repellent, wash treated skin and call the child’s doctor.

MDPH has distributed to all school districts in Massachusetts a Lyme disease curriculum and videotape for students in grades 4-6.

SPORTS-RELATED INFECTIOUS DISEASES

The spread of contagious illnesses among students in the school setting is a problem shared by all educational institutions. Contact in the classroom, the cafeteria or the school yard can facilitate the spread of infectious diseases. In addition to the exposures that students face in these common situations, student athletes may contract or spread infectious diseases while participating in sporting activities. Teachers, coaches and athletic staff, school/team physicians, school nurses and others responsible for the health and safety of athletes need to be aware of the infectious disease spread that can occur during training, competition or even during physical education class activities.

There may be risk of exposure for the individual athlete, the team, and spectators. Transmission of infectious diseases in sports settings usually occurs via direct contact, the fecal-oral route, common-source



exposure or airborne and/or droplet spread. In some cases, disease transmission is unavoidable due to an infectiousness before symptoms become apparent. In other cases the spread of disease occurs as a result of many people congregating together or sharing water bottles or other eating/drinking utensils. The following chart lists some infectious diseases that have occurred due to sports-related activities.

Sports-Related Infectious Diseases

Disease	Mode of transmission	Sport involved
Herpes simplex virus (HSV) (<i>herpes gladiatorum</i>) <i>Staphylococcus aureus</i> Group A streptococci , fungi	direct contact	wrestling, rugby, sumo wrestling, basketball, football
Enteroviruses (coxsackievirus, echoviruses)	common-source or fecal-oral	team sports
<i>Pseudomonas aeruginosa</i>	common-souce	swimming
Meningococcal illnesses	saliva exchange	team sports
Measles	airborne or droplet	tournaments involving gymnastics, basketball, wrestling, other indoor sports

Some concern has been raised about the possibility of sports-related transmission of blood- borne pathogens. To date, this type of transmission has not been implicated in HIV infection and studies have concluded that such risk is remote. Organizations such as The Committee on Sports Medicine and Fitness have addressed concerns about this issue by publishing recommendations or guidelines for standard precautions.

Team physicians, trainers, school nurses, physical education teachers and others involved with the health of the student athlete should not only be able to recognize and manage acute problems, but should also institute policies for the prevention of disease transmission. These policies (taken from Goodman, et al.) should include, but not be limited to, the following:

1. In order to decrease transmission of diseases spread by mucous membrane contact or the fecal-oral route, coaches, trainers and physical education instructors should be educated about the need to prevent exposures of athletes sharing water bottles and pails during sports-related activities.



2. Students diagnosed with skin infections should be cautioned about their participation in sports involving close physical contact. Players with open lesions that cannot be covered should not be permitted to participate in sports where they could transmit disease to others.
3. All athletic equipment in contact with student's skin or secretions should be routinely cleaned after use. This would include, but not be limited to, gymnastic and wrestling mats, mouth guards and other protective equipment.
4. All students must be vaccinated against communicable diseases as described in the section on immunizations.
5. When airborne diseases occur, a mechanism should be in place to inform everyone exposed, including athletes, staff and spectators.
6. Athletes with symptoms of an infectious disease should not be permitted to participate in sports activities until they have been evaluated by their health care provider and are no longer infectious.
7. Public health officials should be immediately notified of a case or a suspected case of a reportable disease in an athlete. Timely reporting of even a suspect case of an infectious disease may help to prevent further spread among athletes, spectators, and the community.
8. Any outbreaks of infectious disease occurring in the school, regardless of cause, should be reported to public health officials to ensure prompt investigation and institution of control measures.

General stop-spread recommendations can be found throughout this chapter as they pertain to particular modes of disease transmission.

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RESOURCES

HIV/AIDS

The following Hotlines are sponsored by MDPH and provide current information on testing and counseling sites:

HIV/AIDS Hotlines (Statewide AIDS Information)

800-235-2331 Statewide/National

617-536-7733 Greater Boston area

617-437-1672 TTY

Monday - Friday 9:00am to 9:00pm

Saturday 10:00am to noon

Youth Only AIDS Hotline (YO Line)

800-788-1234 Statewide/National

617-437-1672 TTY

Monday - Friday 3:00pm to 9:00pm

Hepatitis B

A copy of OSHA's Bloodborne Pathogen Standard is available from:
Massachusetts Division of Occupational Hygiene
101 Watertown Street
West Newton, MA 02165
617-969-7177

Letters to Parents

Parent letters for the following illnesses and diseases may be obtained through the MDPH regional School Health Advisors or the MDPH Division of Epidemiology (617) 522-3700 ext.420: Pinworms, Coxsackievirus (hand, foot, and mouth syndrome), Ringworm, and Scabies.

**Pediculosis**

National Pediculosis Association
P.O. Box 149
Newton, MA 02161
(617) 449-NITS

Rabies

Rabies educational materials may be obtained by contacting the Division of Epidemiology, Department of Public Health (617) 522-3700 ext. 420.

Sexually Transmitted Diseases (STDs)

For further information, data services, educational resources, and clinic hours contact:

STD Control
MDPH
305 South Street
Jamaica Plain, MA 02130
(617) 522-3700, ext. 407

Tuberculosis

For further information contact any local board of health or Division of TB Control

MDPH
305 South Street
Jamaica Plain, MA 02130
(617) 522-3700, ext. 450

Fact sheets on tuberculosis are available from the MDPH Division of TB Control in Cambodian, Cape Verdean, Chinese, Greek, Haitian Creole, Haitian French, Italian, Laotian, Portuguese, Spanish, and Vietnamese.



EXHIBIT 8-1

List of Diseases Reportable to Local Board of Health

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH
LIST OF REPORTABLE DISEASES* (105 CMR 300)
1994

I. DISEASES REPORTABLE TO LOCAL BOARDS OF HEALTH

Amebiasis
Anthrax
Babesiosis
Brucellosis
Campylobacter Enteritis
Chickenpox (varicella)
Cholera
Cryptosporidiosis
Diphtheria
E. coli 0157:H7
Encephalitis (specify type if known)
Foodborne Poisonings
(e) Botulism
(b) Paralytic shellfish poisoning
(c) Other foodborne poisonings as defined in 105. CMR 300.020
Giardiasis
Haemophilus influenzae systemic infection
(without meningitis)
Hansen's disease
Hemolytic Uremic Syndrome (HUS)
Hepatitis, Viral
(e) Type A
(b) Type B (infection, acute disease or carriage)
(c) Type C
(d) Type D
(e) Unspecified
Kawasaki Disease
Legionellosis
Leptospirosis
Listeriosis
Lyme Disease
Malaria
Measles

Meningitis:
(e) bacterial
(b) viral
(c) other
Meningococcal Infection (without meningitis)
Mumps
Pertussis (Whooping Cough)
Polio myelitis
Psittacosis
Rabies (Human or Animal)
Reye Syndrome
Rheumatic Fever
Rocky Mountain Spotted Fever
Rubella
(a) Congenital
(b) Non-congenital
Salmonellosis (including Typhoid and Paratyphoid Fevers)
Shigellosis
Tetanus
Toxic Shock Syndrome
Toxoplasmosis
Trichinosis
Tularemia
Yersiniosis

II. DISEASES REPORTABLE DIRECTLY TO THE DEPARTMENT

ACQUIRED IMMUNE DEFICIENCY SYNDROME (AIDS)
SEXUALLY TRANSMITTED DISEASES
Chancroid
Chlamydial Infections (Genital)
Genital Warts
Gonorrhea
Granuloma Inguinale
Herpes, Neonatal (onset within 30 days after birth)

Lymphogranuloma Venereum
Ophthalmia Neonatorum
(e) Gonococcal
(b) Other agents
Pelvic Inflammatory Disease
(a) Gonococcal
(b) Other agents
Rabies postexposure prophylaxis
Syphilis
Tuberculosis

III. WORK-RELATED DISEASES AND INJURIES REPORTABLE DIRECTLY TO THE

DEPARTMENT
Occupational Lung Disease
(a) Asbestosis
(b) Silicosis
(c) Beryllium Disease
(d) Chemical Pneumonitis
(e) Asthma caused by or aggravated by workplace exposures
Work-related Heavy Metal Absorption
(e) Mercury (blood >15 ug/l; urine >35 ug/grams creatinine)
(b) cadmium (blood >5 ug/l; urine >5 ug/grams creatinine)
(c) Other
Work-related acute Chemical Poisoning
(e) Carbon Monoxide Poisoning
(b) Pesticide Poisoning
(c) Other
Work-related Carpal Tunnel Syndrome
Work-related Traumatic Injury to a Person Less Than 18 Years of Age.

ANY CASES OF ILLNESSES BELIEVED TO BE DUE TO FOOD CONSUMPTION SHALL BE IMMEDIATELY REPORTED BY TELEPHONE TO THE LOCAL BOARD OF HEALTH (105 CMR 300.120)

ANY INSTANCE OF A FOOD HANDLING FACILITY EMPLOYEE WHO HAS CONTRACTED OR BECOME A CARRIER OF A DISEASE TRANSMISSIBLE THROUGH FOOD SHALL BE IMMEDIATELY REPORTED BY TELEPHONE TO THE LOCAL BOARD OF HEALTH (105 CMR 300.121)

ANY CLUSTER OR OUTBREAK OF ILLNESS SHALL BE REPORTED IMMEDIATELY BY TELEPHONE TO THE LOCAL BOARD OF HEALTH (105. CMR 300.122). THE LOCAL BOARD OF HEALTH SHALL REPORT ANY CLUSTER OR OUTBREAK OF ILLNESS TO THE MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH (105 CMR 300.130).

ANY CLUSTER OF WORK-RELATED CONDITIONS, REGARDLESS OF WHETHER OR NOT THEY ARE ON THE REPORTABLE LIST, SHALL BE IMMEDIATELY REPORTED BY TELEPHONE OR OTHER ELECTRONIC MEANS TO THE MDPH, OCCUPATIONAL HEALTH SURVEILLANCE PROGRAM (105 CMR 300.141)

* Diseases declared by the Department of Public Health to be dangerous to the Public Health and reportable under authority of the General Laws, Chapter 111, Section 6 Revised August 1994



CHAPTER 8

EXHIBIT 8-2

Minimal Immunization Requirements

Effective Fall 1995

	Preschool	Kindergarten	Grades 1-6	Grades 7-12
Hepatitis B ¹	3 doses	3 doses ²	—	—
DTP/DT/Td ³	≥ 4 doses	5 doses DTP (unless 4th dose given after 4th birthday, then only 4 doses)	≥ 4 doses DTP or ≥ 3 doses Td	≥ 4 doses DTP or ≥ 3 doses Td with 1 Td booster to be given in grades 10, 11, or 12
Polio	≥ 3 doses	4 doses (unless 3rd dose was given after the 4th birthday, then only 3 doses)	≥ 3 doses	≥ 3 doses
Hib ⁴	≥ 3 doses	—	—	—
MMR ⁵	1 dose	2 doses of measles 1 dose mumps 1 dose rubella ⁶	2 doses of measles 1 dose mumps 1 dose rubella	2 doses of measles 1 dose mumps 1 dose rubella

¹ Hepatitis B vaccine is required for all children born on or after January 1, 1992.

² Effective beginning Fall 1996.

³ DTP half doses are not acceptable. DT is acceptable only when accompanied by a letter stating there is a medical contraindication to DTP. The first Td is needed 10 years after the last dose of DTP and every 10 years thereafter.

⁴ Number of doses of Hib required varies depending on age child starts immunizations. Doses 3 and 4 should be given according to manufacturer's guidelines.

⁵ MMR requirement met if vaccines are given on or after the first birthday, and for measles if the second dose is given ≥ 1 month after the first dose. Use of combined MMR vaccine is recommended.

⁶ Requirement for second dose of measles vaccine in grades 1-6 phased-in from 1996 to 2002. In 2002, all cohorts will have received 2 doses and the 7th grade requirement will be discontinued. However, the 2 doses required for kindergarten entry will continue to be in effect.



EXHIBIT 8-3

Disease and Recommended Evidence of Immunity

Disease	Acceptable Evidence of Immunity
Diphtheria/tetanus	Documentation of completion of a primary series (3 doses) within the past 10 years OR Documentation of a primary series in childhood and regular boosters every 10 years thereafter
Measles	Born before 1957 OR Documentation of vaccination with 2 doses of live measles vaccine given at least 1 month apart, beginning at or after 12 months of age OR Laboratory evidence of immunity <i>A history of measles, or even a physician diagnosis of measles, without laboratory confirmation is not acceptable.</i>
Mumps	Born before 1957 OR Documentation of vaccination with one dose of mumps vaccine given at or after 12 months of age. <i>A history of mumps, or even a physician diagnosis of mumps, without laboratory confirmation is not acceptable.</i>
Rubella	Documentation of vaccination with rubella vaccine at or after 12 months of age OR Laboratory evidence of immunity <i>A history of rubella, or even a physician diagnosis of rubella, without laboratory confirmation is not acceptable.</i>



CHAPTER 8

EXHIBIT 8-4

Investigation of Vaccine-Preventable Diseases

1. Report case to appropriate health authorities:
 - Providers report to the local board of health in the town in which they practice.
 - Local boards of health report to their regional epidemiologist. In addition, providers may contact their regional epidemiologist.
 - Regional epidemiologist will report to the state Department of Public Health.
2. Verify diagnosis:
 - Obtain description of illness from patient, family member of patient, *and* health care provider.
 - Does it meet the case definition?
 - For measles, mumps, and rubella, encourage serology submission. For pertussis, encourage culture and serology submission.
3. Obtain the case's immunization history from the health record and verify it with the health care provider.
4. Identify possible sources of exposure:
 - Are there any other students at the school with similar symptoms?
 - Was there travel to other areas one incubation period prior to onset of symptoms?
 - Did the case have visitors from other areas one incubation period prior to onset of symptoms?
5. Prevent spread:
 - Inform boards of health, physicians, medical settings, schools, and day care centers.
 - Isolate case during infectious period.
 - Identify everyone who was in contact with case during infectious period. Think in terms of **zones of exposure** and consider the following groups:
 - household members
 - school/day care
 - medical facility where the patient was seen
 - workplace of case (especially day cares, schools and medical settings)
 - religious/social groups
 - sports teams, other extracurricular groups
 - bus mates, carpool mates
 - close friends
 - Identify susceptibles (will differ for each disease), especially high-risk persons.
 - Isolate susceptibles for the required period.
 - Immunize/prophylax when appropriate.
 - Maintain surveillance of contacts for two incubation periods.



EXHIBIT 8-5

Sample Letter to Parents About Hib Disease

Dear Parent or Guardian:

A child in school has a serious infectious illness caused by a bacteria named *Haemophilus influenzae*, type B. A short way of writing the name is Hib. Hib spreads from person to person either by sharing breathing space or by being in close physical contact (i.e. kissing or sharing eating utensils, drinking cups, straws etc.). It is not at all related to the regular flu.

Hib can cause very serious illnesses such as meningitis (infection of the coverings of the brain), pneumonia, arthritis, epiglottitis (infection of the upper throat), blood infections, and skin infections, all of which need hospital treatment and intravenous (IV) antibiotics.

The bacteria can spread from child to child in a school, and can cause serious illness but there is a medicine that can be taken to help eliminate the bacteria from someone else who has been exposed. At this time, however, only people who are considered to be close contacts of the ill person need to take this medication. Those individuals will be required to receive this medication before returning to school.

Your child is not believed to be a close contact of the ill person. If you feel, however, that your son or daughter has shared any of the exposures outlined above with the ill person in the 7 days previous to their becoming ill, please **notify your health care provider or the school health office.** In either case, watch your child for signs of illness, particularly fever, headache, stiff neck or other symptoms associated with the illness described above. If your child becomes ill, take him or her to your health care provider. Watch carefully for 2 months, but especially in the next week.

If your child is under 5 years of age, check with your health care provider to make sure your child has completed the 3 or 4 dose series of Hib vaccinations.

The school will also be very watchful over the next 2 months. If another child comes down with this illness, we will notify you.



EXHIBIT 8-6

Sample Letter to Parents of Close Contacts about Hib Disease

Dear Parent or Guardian:

A child in our school has a serious infectious illness caused by a bacteria named *Haemophilus influenzae*, type B. A short way of writing the name is Hib. Hib spreads from person to person either by sharing breathing space or by being in close physical contact (i.e. kissing or sharing eating utensils, drinking cups, straws etc.). It is not at all related to the regular flu.

Hib can cause very serious illnesses such as meningitis (infection of the coverings of the brain), pneumonia, arthritis, epiglottitis (infection of the upper throat), blood infections, and skin infections, all of which need hospital treatment and intravenous (IV) antibiotics.

The bacteria can spread from child to child in a school but there is a medicine called rifampin that can be taken to help eliminate the bacteria from someone else who has been exposed. When only one case of Hib occurs only people who have had close contact with the ill person in the seven days before the ill person got sick need to take this preventive medication.

Occasionally more than one case of Hib may occur in a classroom. Officials then recommend that all classroom contacts need to take preventive medicine.

We feel that your child has had close contact with the ill person. Please take the following steps:

1. Tell your health care provider that your child was exposed to another child who has come down with an illness caused by *Haemophilus influenzae*, type B (Hib). Bring this letter to discuss that fact that your child is being considered to have had close contact with the ill person (e.g., classroom, play group, or other shared activities, kissing or sharing eating utensils, drinking cups, straws etc.)
2. **Explain that as a close contact of the ill person, our health consultant recommends that your child take rifampin (unless there is a reason why your child cannot take this medicine) once a day for 4 days. Rifampin can help eliminate the bacteria from the person who has been exposed. Even exposed children who have received the vaccine need to take Rifampin.**
3. **Because your child is a close contact, he or she may not return to school until rifampin has been started. If your child will not be taking this medication, then he or she must not return to school for one week.**
4. **Watch your child for signs of illness**, particularly fever, headache, stiff neck or other symptoms associated with the illness described above. If your child becomes ill, take him or her to your health care provider. Watch carefully for 2 months, but especially in the next week.
5. If your child is under 5 years of age, check with your health care provider to make sure your child has completed the 3 or 4 dose series of Hib vaccinations.

The school will also be very watchful over the next 2 months. If another child comes down with this illness, we will notify you.



EXHIBIT 8-7

Sample Letter to Parents about Diarrheal Diseases

Dear parent or guardian:

_____ A student at our school has a diarrheal disease.

_____ Your child may have a diarrheal disease.

Please take the following precautions:

1. Watch your child and members of your family to see if they develop diarrhea, stomach cramps, gas and/or nausea.
2. If your child develops severe diarrhea, diarrhea with fever or vomiting, or diarrhea with blood or mucus, *do not send your child to school.*
3. If your child develops mild diarrhea, please call us to discuss whether attendance is recommended.
4. In either case, we may ask your health care provider to do the tests for bacteria and parasites in the stool. We may ask you to get tests for your child and for other family members who develop diarrhea.
5. Be sure to remind your health provider that there are other students with diarrhea at your child's school. If your child's test is positive, keep your child home until any serious diarrhea or illness is over.
6. Keep us informed about how your child is doing and about any test results or treatment.

Information about diarrheal diseases:

What are they? Diarrheal diseases are caused by germs (bacteria, parasites, or viruses) that multiply in the intestines and are passed out of the body in the stool. Anyone can get diarrheal diseases, and they can be caught repeatedly. People with these germs in their stool may not actually have diarrhea or feel sick. Laboratory tests are the only way to tell if a particular stool contains germs.

Five diarrheal diseases commonly found in children and young adults are listed here, along with their symptoms. The disease that may be causing illness at our school has been circled. If no disease has been circled, the specific cause of the diarrheal disease is not yet known.

Name	Caused by	Symptoms
Rotavirus	A virus	Most cases of winter diarrhea are in children younger than 2 years, but also occur in older children and adults; usually preceded or accompanied by vomiting and low-grade fever; may also have runny nose and cough
Giardia	A microscopic parasite	Mild to severe diarrhea, bad-smelling diarrhea, gas, stomach cramps, nausea, lack of appetite, and/or possible weight loss
Shigella	Microscopic bacteria	Mild to very severe diarrhea, fever, stomach pain, and/or diarrhea with blood or mucus
Salmonella	Microscopic bacteria	Mild to severe diarrhea, fever, and/or painful stomach cramps
Campylobacter	Microscopic bacteria	Mild to severe or bloody diarrhea, fever, stomach cramps, and/or vomiting

How do you catch diarrheal diseases? When people do not wash their hands well after going to the bathroom, changing diapers, or helping a child go to the bathroom, microscopic diarrheal germs stay on their hands and the children's hands. The germs can then spread to food or drink or to objects and, eventually, to other people's hands and mouth. The germs are then swallowed by the other people, multiply in their intestines, and cause an infection. Obviously, diarrheal diseases can spread easily among young children who normally get their hands into everything and may not wash their hands well.

How do you know if you have a diarrheal disease? Some of these diseases can be diagnosed by examining the stool under a microscope, some by growing the germs in the laboratory, others by special chemical tests. Since the germs are usually passed in the stools off and on, stool samples taken on several days may need to be examined.

How can you stop the spread of diarrheal diseases in your household?

1. **Be sure everyone in the family thoroughly washes their hands after using the bathroom or helping a baby or child with diapers or toileting and before preparing or eating food.** Babies and children need to have their hands washed, too, at these times.
2. If someone in your family develops diarrhea, ask your health care provider to consider doing a test for germs in the stool. This is critical for family or household members who handle or prepare food.
3. Your health care provider will decide about treatment for your child and/or other family members who have diarrheal diseases.



EXHIBIT 8-8

Sample Letter to Parents about Hepatitis A

Dear parent or guardian:

A student or staff member at our school has been diagnosed with a viral infection called hepatitis A, and your child may have been exposed.

Information about hepatitis A

Hepatitis A is an infection of the liver caused by a virus. It can cause tiredness, fever, lack of appetite, nausea, and jaundice (yellowing of the skin and whites of the eyes, with darkening of the urine). The illness usually lasts 1 to 2 weeks. Young children do not usually become jaundiced, however, and may have only a flu-like illness, or nothing at all.

How do you get it? The virus lives in the intestines and is passed out of the body in the stool. The virus is microscopic, so you cannot see it. A person is most contagious during the 2 weeks before the illness begins, when there are the most virus particles in the stool. If people do not wash their hands well after toileting a child or themselves or do not wash the child's hands, the virus can be spread to other people, food, drink, or other things. The germs can then be swallowed by another person, multiply in the intestines, and cause illness 2 to 8 weeks later. If a person may have swallowed some germs, the illness may be prevented by a shot of immune globulin.

How is it diagnosed? Hepatitis A is diagnosed by a blood test.

What should you do about hepatitis A?

1. Be sure all members of your household thoroughly wash their hands after going to the toilet, helping a child go to the toilet, or changing a diaper. They must wash the children's hands, too. *These are the most important things to do!* Hands should also be washed before touching food, eating, or feeding. Encourage your children not to share food or eating or drinking utensils with their friends at school.
2. If anyone in your household develops signs of hepatitis A, ask your health care provider to do a blood test. Tell us if it is positive.
3. Ask your health care provider to give your child a shot of immune globulin. The immune globulin may be available free of charge to your physician from your state or local health department. Ask your health care provider to give immune globulin shots to the other people in your household.



EXHIBIT 8-9

Sample Letter to Parents about Strep Throat

Dear parent or guardian:

_____ A student at our school has strep throat.

_____ Your child may have strep throat.

Please take these precautions:

1. Watch your child for signs of a sore throat and other signs of strep (headache, fever, stomachache, swollen and tender neck glands).
2. If your child develops a sore throat and any of these other signs, please see your health care provider, tell her or him that another child in the program has strep, and ask to have your child tested for strep throat. If strep is found, your child should receive treatment.

Information about strep throat

What is strep throat? **Strep throat** is a sore throat caused by Streptococcus bacteria that are passed around through nose and mouth droplets. It is very common in children. Most sore throats, however, are caused by **viruses** and are not treated with antibiotics.

Why is it important that your child receive treatment? There are three main reasons:

1. **Treatment reduces spread.** If not treated or not treated long enough, your child may continue to spread the infection to other members of your family or to other children.
2. **Treatment with antibiotics can usually prevent rheumatic fever.** Rarely, some children with strep throat later develop rheumatic fever—abnormalities of the heart valves and inflammation of the joints.
3. **Treatment will also prevent other rare, but possibly dangerous, complications.**

When can your child come back to the program? Children with strep infections may return to school after taking medicine for **at least 24 hours and fever is gone.**

What should you do to prevent the spread of strep throat?

1. Thoroughly wash your hands and your child's hands after wiping noses and before eating or preparing food.
2. Wash dishes carefully in hot, soapy water or a dishwasher.
3. Do not allow the sharing of food or allow children to share cups, spoons, or toys that are put into the mouth.



CHAPTER 8

EXHIBIT 8-10

Sample Letter to Parents about Chickenpox

Dear parent or guardian:

_____ A student or staff member at our school has chickenpox

_____ Your child may have chickenpox.

Information about chickenpox:

What is it? Chickenpox is a very contagious infection caused by a virus. It usually begins with a mild fever and an itchy rash. The rash starts as small, red bumps that become blistery, may ooze, and then crust over. Most children recover without any problems. The disease can be more serious in individuals with weakened immune systems and pregnant women. It can also be severe in healthy susceptible adults and adolescents 15 years of age or older.

How is it spread? It is spread through exposure to infected fluids from the nose, throat, or skin rash of someone with chickenpox. This can occur either by sharing that person's breathing space or by directly touching the infected fluids from the skin. Chickenpox is contagious from 1 to 2 days before the rash starts until 5 days after the rash began. After exposure, it takes 10 days to 3 weeks before the rash appears. Usually it appears in 14 to 16 days.

Treatment: Chickenpox is generally not a serious disease, and the symptoms can be treated with plenty of fluids, rest, anti-itching medicines and lotions, and medicine for fever control. In certain circumstances, a drug called acyclovir might be prescribed by a health care provider.

Caution: *Aspirin (salicylate) containing products should not be used for fever control in children with chickenpox.* There is a possible association between the use of aspirin and a rare but very serious disease called Reye syndrome (vomiting associated with liver problems and coma).

What should you do about chickenpox?

1. Watch your child for the next 10 days to 3 weeks to see if the chickenpox rash develops.
2. Do not send your child to school with a suspicious rash. Ask your health care provider to diagnose the illness and to give you anti-itching medicine or lotions if the itching is disturbing the child.
3. If your child develops chickenpox, he or she can return to school on the sixth day after the rash began or when all the blisters are dried up and crusted over.
4. If one of your children develops chickenpox, other people in the family who have not had it will probably get it too, because chickenpox is very easily spread.
5. If you or anyone else in your household has a weakened immune system or is pregnant, and is *susceptible* to chickenpox, talk to your doctor **immediately**. You are susceptible if you do not know for sure that you had chickenpox in the past or have not had a blood test showing you have had the disease in the past and are thus now protected. Women who get chickenpox when they are pregnant are more likely than other adults to develop serious complications. Babies born to mothers with chickenpox near the time of delivery can develop high fever and other serious problems.

Pregnant women and immunocompromised children and adults susceptible to chicken pox can be given VZIG (varicella-zoster immune globulin) to prevent serious complications. For VZIG to work, it must be given less than 96 hours (4 days) after exposure to chickenpox.



EXHIBIT 8-11

Sample Letter to Parents about Fifth Disease

Dear parent or guardian:

_____ A student in our school has fifth disease.

_____ Your child may have fifth disease.

Information about fifth disease:

What is it? Fifth disease is a mild rash illness that usually affects children. It is caused by a Parvovirus B19, that lives in the nose and throat and can be spread from person to person.

The **first stage** of illness consists of headache, bodyache, sore throat, low-grade fever, and chills. These symptoms last about 2 to 3 days and are followed by a **second stage**, lasting about a week, during which the person has no symptoms at all. Individuals are most infectious before the beginning of their symptoms. In children, the **third stage** involves a bright red rash on the cheeks, which gives a "slapped cheek" appearance. This may be followed by a "lacy" rash on the trunk and arms and legs. The rash begins 17 to 18 days after exposure. The rash may appear on and off for several weeks with changes in temperature, sunlight, and emotional stress. Adults may not develop the third-stage rash but may experience joint pain, particularly in the hands and feet. The disease is usually mild, and both children and adults recover without problems. In rare situations some people, especially those with blood disorders such as sickle cell anemia or other hemoglobinopathies and those with weakened immune systems, may develop more severe symptoms. These people may also be infectious for a longer period of time.

Who gets it and how? Children and adults can get parvovirus B19. When an infected person coughs, sneezes, or speaks, the virus is sprayed into the air. These contaminated droplets can then be inhaled or touched by another person. Women who develop fifth disease during pregnancy may pass the infection to their unborn fetus. In rare situations, miscarriages and stillbirths have been associated with fifth disease during pregnancy. Other persons at high risk for complications include those with certain blood disorders and those with deficient immune systems.

How is it diagnosed? The diagnosis in children is based on the clinical symptoms of the facial rash. A laboratory test that can detect newly formed antibodies to the parvovirus B19 may be used for pregnant women, persons with blood disorders, and people with deficient immune systems who may be at higher risk for complications from fifth disease.

How is it treated? There is no specific treatment for fifth disease. Health care providers may suggest treatment to relieve some symptoms. There is no vaccine to prevent fifth disease.

Must your child stay home? Children with fifth disease do **not** have to stay home. By the time they are diagnosed with the rash, they are no longer contagious.

What should you do?

1. Watch for the symptoms of fifth disease and tell us if your child had fifth disease.
2. If you are pregnant or have a blood disorder or weakened immune system, tell your health care provider about your possible exposure.
3. Always be careful about hand washing, especially after touching discharge from the nose and throat and before eating or handling food.



EXHIBIT 8-12

Sample Letter to Parents of Close Contacts about Meningococcal Illnesses

Dear Parent or Guardian:

A student or staff member in our school has a serious illness caused by bacteria named *Neisseria meningitides*. The bacteria can spread between persons who are in close physical contact with exchange of saliva, for example, through coughing, sneezing, kissing, and the sharing of eating and drinking utensils such as drinking cups and **water bottles**. There are medications that can be taken to reduce the risk of infection. However, only people who are considered to be close contacts of the ill person need to take preventative medication.

We feel that your child has had close contact with the ill person. Please take the following steps:

1. Tell your health care provider that your child was exposed to another student or staff member who has come down with a meningococcal illness. Bring this letter to discuss the fact that your child is being considered to have had **close contact** with the ill person (e.g., close enough to have shared eating or drinking utensils such as water bottles or drinking cups or to have been kissing) in the 2 weeks prior to their becoming ill.
2. **As a close contact of the ill person, our health consultant recommends that your child take an antibiotic. This preventative treatment can help eliminate the bacteria from the person who has been exposed.**
3. **Because your child is a close contact, he or she may not return to school until preventive antibiotic treatment has been started.**
4. **Watch your child for signs of illness such as headache, stiff neck, fever, and vomiting for the next 3 weeks. If your child becomes ill, take her or him to a doctor immediately, whether or not antibiotics were given.** The medicine is not always 100% effective. *Neisseria meningitides* can cause meningitis, an infection of the coverings of the brain, that is often fatal if not treated with antibiotics. Symptoms of meningitis include headache, stiff neck, fever and chills, vomiting, and a rash.

Our school will be very watchful during the next 3 weeks. We will notify you if anyone else becomes ill.



EXHIBIT 8-13

Sample General Letter to Parents about Meningococcal Illnesses

Dear Parent or Guardian:

A student or staff member in our school has a serious illness caused by bacteria named *Neisseria meningitides*. Although children younger than 5 are most often affected, older children and adolescents are the next group most commonly affected. Adults can become ill as well. The bacteria can be spread between persons who are in close physical contact through exchange of saliva, through coughing, sneezing, kissing, or the sharing of eating and drinking utensils such as drinking cups and **water bottles**. While household contacts are at the highest risk of contracting this illness, others sharing the above exposures are at risk as well.

There are medications that can be taken to reduce the risk of infection. These medicines can help eliminate the bacteria from someone else who has been exposed. However, at this time, only people who are considered to be close contacts of the ill person need to take this medication. Those individuals will be required to receive this medication before returning to school.

Many people can carry the *Neisseria meningitides* bacteria in their nose, throat, and mouth without getting sick. In most cases, carriage of the organism does not pose a danger. However, both sick people and carriers can pass these germs to others. The time from exposure to illness can be from 1 to 10 days, but is usually 1 to 4 days.

Your child is not believed to be a close contact of the ill person. If you feel, however, that your son or daughter has shared any of the exposures outlined above with the ill person in the 2 weeks previous to their becoming ill, please **notify your health care provider or the school health office**. In either case, **watch your child for signs of illness such as headache, stiff neck, fever, or vomiting for the next 3 weeks. If your child becomes ill, take him or her to a doctor immediately.** *Neisseria meningitides* can cause meningitis, an infection of the coverings of the brain, that is often fatal if not treated with antibiotics. Symptoms of meningitis include headache, stiff neck, fever and chills, vomiting, and occasionally a skin rash with fine red "freckles" or purple splotches.

Remember that our school will be very watchful during the next 3 weeks. We will notify you if anyone else becomes ill or if our recommendations change. If you have any questions or concerns about your child, contact your physician or the school health office.



EXHIBIT 8-14

Letter to Parents about Impetigo

Dear Parent or Guardian:

_____ A student at our school has impetigo

_____ Your child may have impetigo.

Please take these precautions:

1. Check your child's skin for an impetigo rash.
2. Take your child to your health care provider if you suspect your child has an impetigo rash so that medicine may be prescribed.
3. Tell us if your child is treated for impetigo.
4. If your child has impetigo, return her or him to the school after 24 hours of treatment has been given.

Information about impetigo:

What is it? Impetigo is a skin infection common in young children. It is seen mostly on the face and around the mouth but can occur any place on the skin. In impetigo infections, the skin becomes red and may ooze. There may be small bumps clustered together or larger red areas. These areas may have honey-colored crusts or blisters. Impetigo spreads quickly and is often itchy. Children may scratch the crusts off and cause a little bleeding.

What causes it? Impetigo is caused by common skin germs (such as strep and staph). These germs usually cause infection only when the skin gets injured (scraped, cut or scratched). Impetigo can spread easily among young children.

How is impetigo diagnosed and treated? Your health care provider can tell you if your child has impetigo. Usually it is treated with some combination of a special soap, an antibiotic ointment, and sometimes an oral antibiotic.

What should you do about impetigo? Keep the impetigo rash clean and dry. You may want to cover it lightly so the ooze and crusts cannot be spread to other people. People who touch the rash should wash their hands very well.



EXHIBIT 8-15

Letter to Parents about Conjunctivitis

Dear parent or guardian:

_____ A student of our school has conjunctivitis (also called pinkeye)

_____ Your child may have conjunctivitis.

Please take these precautions:

1. Watch your child and family members for signs of pinkeye.
2. See your health care provider if your child develops pinkeye.
Your child may need to be given an eye medication.
3. Do not send your child to school until **the day after** you start giving the medicine. If your health care provider decides not to prescribe an eye medicine, ask for a note to ensure your child's attendance.
4. Tell us if your child is being treated for pinkeye.

Information about conjunctivitis:

What is it? Pinkeye is an infection of the eyes. It is most often caused by a virus but can also be caused by bacteria. The white parts of the eyes become pink or red; the eyes may hurt or feel itchy or scratchy; and the eyes may produce lots of tears and discharge. In the morning, the discharge (pus) may make the eyelids stick together. (Some children and adults have allergies that can cause everything listed here *except pus*.) Conjunctivitis is a mild illness and is not dangerous. Doctors usually prescribe an antibiotic eye medication just in case it is due to bacteria.

How do you catch conjunctivitis? The pus is infectious. If children rub their eyes, they get it on their hands. They can then touch someone else's eyes or hands or touch an object. If other children get discharge on their hands and then touch their own eyes, they can catch it. It can spread easily among young children, who touch their eyes and everything else and who do not know how (or forget) to wash their hands.

What should you do if your child has conjunctivitis?

1. Keep your child's eyes wiped free of discharge. Use paper tissues, and throw them away promptly.
2. **Always thoroughly wash your hands after wiping your child's eyes.**
3. Teach your children to wash their hands after wiping their eyes.
4. Ask your health care provider if your child needs to receive eye medication.
5. Be sure to wash anything that touches your child's eyes (such as washcloths, towels, binoculars, toys, and cameras).



CHAPTER 8

EXHIBIT 8-16

Sample Letter to Parents about Head Lice

Dear parent or guardian:

_____ A student in our school has head lice.

_____ Your child has head lice.

Please do not be alarmed, as this is a common occurrence in schools. Head lice are not a sign of unclean people or homes.

Please take these precautions:

1. Check your child's hair for eggs (also called nits).
2. If you suspect your child has head lice, ask your health care provider to diagnose the problem and recommend appropriate treatment.
3. Tell us if your child is diagnosed as having head lice.
4. If head lice are diagnosed, do not return your child to school until she or he has been treated.

Information about head lice:

What are they? Head lice are tiny insects that live only on people's scalp and hair. They hatch from small eggs (nits) that are firmly attached to the individual hairs near the scalp and cannot be easily moved up or down the hair (as can specks of dandruff). They look like grains of sand. Nits may be found throughout the hair but are most often located at the back of the scalp, behind the ears, and at the top of the head. The eggs hatch in about 10 days, with new lice reaching adulthood in about 2 weeks. The female louse, about the size of a sesame seed, can live for 20 to 30 days and can lay about six eggs a day. The lice live by biting and sucking blood from the scalp. Lice can survive up to 8 hours between feedings and can do so off the body. Until a person with head lice is treated they can transmit them to others.

How should you check for head lice? You probably will not see the lice, only the eggs. These are tiny, pearl-gray, oval-shaped specks attached to the hair near the scalp. Look carefully, using a magnifying glass and natural light. Search for nits at the back of the neck, behind the ears, and at the top of the head.

How does a person get head lice? Anyone who has close contact with an infested person or shares personal items can become infested. Lice are spread **only** by crawling from person to person directly or onto shared personal items, such as combs, brushes, head coverings, clothing, bedding, or towels.

What should you do about head lice? If your child does have head lice, your health care provider may want to treat everyone in your family. Everyone should be checked, and anyone with nits should definitely be treated.

To get rid of head lice:

1. **Use a medicine that your health care provider prescribes or recommends.** Use any of these products very carefully, and consult a physician before treating infants, pregnant or nursing women, or people with extensive cuts or scratches on the head or neck.
2. After appropriate treatment, removal of nits is not necessary to prevent spread, although sometimes removal is done for aesthetic reasons. Removal is a difficult and time-consuming process because nits have such a firm grip on the hair. A solution of vinegar and water may help loosen nits so you can remove them with a special, fine-toothed, nit-removal comb.
3. **Check for nits daily for the next 10–14 days.** Then repeat the treatment to kill any newly hatched lice.
4. **Clean personal items and surroundings:**
 - Machine wash all washable and possibly infested items in **Hot** water. Dry them in a **Hot** dryer.
 - Put nonwashable items (furry toys or pillows) in a **Hot** dryer for 20 minutes or dry clean them.
 - Seal items that cannot be washed or dried in a plastic bag for 10 days (any eggs or lice present will die in this time)
 - Soak combs and brushes for 10 minutes, or wash them with a shampoo approved to kill lice.
 - Thoroughly vacuum rugs, upholstered furniture, and mattresses.
 - Do not use insecticide sprays because they can be harmful to people and animals.

When can your child return? Your child may come back as soon as the shampoo has been used, you have removed as many nits as possible from your child's hair, and you have cleaned or stored personal items. Remember that you must keep checking your child's hair for new nits for at least 2 weeks. [N.B.: Insert your school's policy on return if different from this statement.]

PREVENTION AND HEALTH PROMOTION

Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity, as defined by the World Health Organization. There is growing interest in Massachusetts (and throughout the world) in preventing health problems and promoting behaviors that improve individual and community health. The challenge is to use what has been learned about effective strategies to prevent health adversities and to encourage the widespread and consistent practice of healthy behaviors.

School health programs in Massachusetts and other states throughout the nation are increasing their emphasis on preventive programs and health services. Due to changing family conditions and numbers of students attending school with health problems, the traditional role of providing assessment and screening for all students has broadened to include a focus on the physical condition of younger students, as well as substance abuse, early pregnancy, and sexually transmitted disease among older students. School health encompasses a range of activities that promote and protect student health.

There is an enormous and growing body of knowledge about the benefits of prevention in decreasing the incidence of disease and other health problems. We know that promotion of preventive practices concerning safer sexual behaviors, sharing needles, and blood transfusions are effective ways to stop the spread of the deadly human immunodeficiency virus (HIV) that causes AIDS. Prevention of disease through immunization programs has decreased and virtually eradicated a number of serious and fatal diseases in the United States and the rest of the developed world. Research indicates that changes in behavioral patterns regarding smoking, exercise, diet, and alcohol and drug consumption will result in improved health and longer life span.

Emphasis on prevention and health promotion also improves the overall quality of life for individuals and the community as a whole. Prevention conserves and strengthens human resources, including the physical, emotional, spiritual, and intellectual capacity of the community and its residents. Prevention has an impact on public health by emphasizing healthy behavior and influencing the pattern of interaction among the (1) individual or the community, (2) the agent (biological or behavioral-related cause), and (3) the environment. A preventive approach to public health addresses individual, family, peer, organization, and community risk factors and the likelihood that individuals and groups may experience health problems or engage in unhealthy behaviors.

Of equal importance are protective or resiliency factors, the conditions that increase the likelihood of positive health outcomes. Experience from practice and research suggests that many health behaviors are interrelated. Prevention efforts promote resiliency factors that improve individual and community health and reduce the impact of risk factors that lead to increased health problems.

Each school will define its health programs in part by assessing local needs and resources. Some examples of school-based prevention and health promotion programs include smoking prevention and cessation; weight reduction; health assessment programs providing screening and risk appraisal; physical fitness activities; and curricula geared to substance abuse, sexuality education, injury prevention, violence prevention, nutrition, and mental health. In this section, we focus on various aspects of a comprehensive school health and human services program.

Chapter 9:

Nutritional Health presents information on the nutritional needs of school-aged children and adolescents, including their nutritional requirements, dietary guidelines, and common nutrition-related questions. It discusses current nutritional issues as well as factors influencing eating behaviors. The special nutritional needs of children with special health care needs, adolescent athletes, and pregnant adolescents are addressed. School food service, including the school breakfast program, the school lunch program, and foods served at school events, is also discussed. The chapter contains several exhibits including a sample nutritional assessment and key nutrients in food.



SECTION III

Chapter 10:

Physical Fitness recognizes the importance of physical activity in maintaining the good health of all students. It outlines the state laws governing physical education and the physical activity of students in Massachusetts. The chapter discusses the current trends in physical education which include emphasis on teaching noncompetitive team skills and an understanding of fitness concepts. Fitness is described in terms of the various components which make up a program, age-appropriate activities, and the amount of physical activity necessary for fitness. Also discussed are sports in schools.

Chapter 11:

Mental Health identifies the important elements of a healthy emotional and social environment. It describes in detail the developmental stages of children's and adolescent's emotional and psychological development and the prevention techniques necessary for intervention. Common psychological problems are discussed and include depression, suicidal tendencies, divorce, grief, disruptive behavioral disorders, attention deficit disorders, eating disorders, and psychosomatic illnesses. The chapter gives a description of each problem that includes symptoms and action that schools can take.

Chapter 12:

Sexuality and Reproductive Health discusses the importance of sexuality and reproductive health education in the school setting. It gives an overview of sexuality education and guidance for developing a program which suits the needs of the community, the parents, families and students. The chapter examines sexual development and gives recommendations for physical examinations. Prevention of adolescent pregnancy and STDs are discussed, as well as the issues surrounding adolescent pregnancy. Other sexuality issues, including cultural diversity, sexual orientation, and sexual abuse and sexual assault are identified.

Chapter 13:

Injury and Violence Prevention focuses on teaching safety and violence prevention as well as discussing the different types of interpersonal violence and unintentional injuries that exist. Because injuries are "no accident", the chapter emphasizes the importance of education, safety of the environment, and enforcement of safety laws and guidelines. Guidelines are given for a school-based violence prevention program. A large number of fact sheets on interpersonal violence and unintentional injuries are provided at the end of the chapter. In addition, select state laws on safety, health education and transportation are included.

Chapter 14:

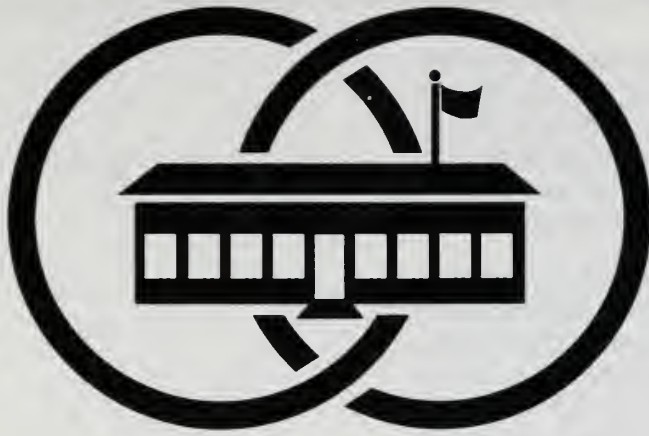
Alcohol, Tobacco and Other Drugs gives a detailed description of the problems of substance abuse and tobacco use in our society and the need for an effective and comprehensive prevention program in our schools. The chapter outlines and describes the components of a such a program and discusses why prevention works. It discusses the prevalence of alcohol, tobacco, and other drug use, its detrimental health effects, and those who may be at risk of developing a problem. Smoking and tobacco cessation programs and the benefits of quitting smoking are emphasized.

Chapter 15:

Oral Health describes the important role that schools have in promoting oral health. The chapter starts off with a discussion of the scope of the problem of oral disease. A discussion of health promotion, prevention, and education includes information on fluorides, flossing and brushing, dental sealants, dental examinations, and restricting use of sugar and refined carbohydrates. Another important aspect of oral health in the school setting is first aid for dental problems and emergencies.

Chapter 16:

Refugee and Immigrant Health concentrates on the issues that may affect children and adolescents' access to health care information and services in the state. It is important for school personnel to be sensitive to the customs, health beliefs and practices, and family roles of newcomers. A discussion on different strategies for cultural assessment may help school personnel with transcultural interactions. Because access to services may be affected by many different factors, increased knowledge about the issues will help schools to better understand and communicate with newcomers.



Chapter 9

NUTRITIONAL HEALTH

Nutritional Needs of School-aged Children and Adolescents

Factors Influencing Eating Behaviors

Current Nutritional Issues

Nutritional Issues of Children with Special Health Care Needs

Nutritional Needs of Adolescent Athletes

Nutritional Needs of Pregnant Adolescents

Food in the School Environment



Chapter 2

Introduction to the Study

The purpose of this study is to explore the experiences of...

The study was conducted in a qualitative manner...

The data was collected through interviews...

The study was limited to the following participants...

The data was analyzed using the following methods...

The study was approved by the Institutional Review Board...

The study was conducted in a confidential manner...



Nutrition affects the health of people of all ages and at all stages of the life cycle and is an essential factor to address when assessing overall health. Eating a variety of nutritious foods is important for health. In addition, many other factors — psychological, cultural, geographic, religious, economic, and social — influence one's health and nutritional status.

Evidence from nutritional research strongly suggests that dietary patterns that contain excessive intake of foods high in calories, fat (especially saturated fats), cholesterol, and sodium and low in complex carbohydrates and fiber contribute significantly to high rates of major chronic diseases. Diet has been associated with five out of ten of the leading causes of morbidity and mortality in the United States: coronary heart disease, generalized atherosclerosis, stroke, diabetes mellitus, and some types of cancers.

Many chronic illnesses start in early childhood. Studies have documented risk factors associated with the major chronic diseases, such as high serum cholesterol and high blood pressure, in child and teen populations. Diets that contribute to some of these risk factors are widespread among all income levels and ethnic groups across America.

Schools can play a major role in improving health status by providing students with a solid foundation of health and nutrition information that will be of critical importance over their lifetime. Comprehensive school health programs should provide students with the opportunity to learn and practice healthy food choice and eating behaviors and develop an understanding of the relationship between food, nutrition, and health.

NUTRITIONAL NEEDS OF SCHOOL-AGED CHILDREN AND ADOLESCENTS

Children and adolescents require nutritionally sound diets to achieve optimal physical growth and development. Proper nutrition coupled with regular physical activity provide both immediate and long-term health benefits. The child's family plays the most important role in instilling healthy eating behaviors by helping children to develop the mechanical skills to eat independently and by preparing and serving nutritious, age-appropriate foods to meet the child's growing needs.

The school also plays a vital role in communicating healthful eating patterns. Ideally, the school should function as an extension of the parents, reinforcing positive nutrition behaviors learned at home. For children who have not learned healthy eating skills at home, schools can help by providing children with well-balanced healthy meals through the school meals program and by reinforcing healthy eating practices through modeling and nutrition education in the classroom. Exhibit 9-1 provides a sample nutritional assessment form to be used by school health professionals with students.

Nutrient Requirements for Children and Adolescents

The Recommended Dietary Allowances (RDAs) are standards set by the Food and Nutrition Board, National Research Council, and National Academy of Sciences for daily nutrient needs of a population group over time. RDAs are designed to exceed the requirements of most healthy individuals.



RDA values are based on age and gender and are adjusted for pregnant and breast-feeding women. They have not been established for all nutrients; therefore, it is still recommended that RDAs be met by consuming a variety of foods from all the food groups rather than through supplementation or fortification. Exhibit 9-2 at the end of the chapter displays key nutrients and their food sources.

RDAs are used to evaluate the adequacy of nutrients in the nation's food supply, establish standards for food assistance programs, determine the nutrient status of the U.S. population, develop food products, and develop the U.S. Recommended Daily Allowances (USRDA) as standards for how nutritional content of foods is listed on a product label. The percentages of USRDAs tell you how well a product meets the nutrient needs of most people. Schools can use RDAs to plan nutritionally balanced school meals.

The Dietary Guidelines and Food Pyramid

The Dietary Guidelines for Americans have been established to aid persons over age 2 years in eating a healthful diet:

1. Eat a variety of foods.
2. Maintain a healthful weight.
3. Choose a diet that is low in fat, saturated fat, and cholesterol.
4. Choose a diet with plenty of vegetables, fruits, and grain products.
5. Use salt and sodium only in moderation.
6. Use sugars only in moderation.
7. If alcoholic beverages are consumed, do so in moderation.

The most recent dietary guidelines were established in 1991 by the U.S. Department of Agriculture (USDA) and Department of Health and Human Services (DHHS). This collaborative effort arose a new pictorial representation of healthful food choices, the **Food Guide Pyramid** (see Exhibit 9-3). The pyramid design helps to illustrate how to turn the guidelines into food choices. The design illustrates the recommended daily amounts by the size of space allotted each group: the more required, the bigger the block. As the pyramid demonstrates, a healthy diet is composed primarily of foods from the foundation of the pyramid (breads, cereals, and other grains) together with abundant amounts of fruits and vegetables. Meats, poultry, fish, and other protein foods, as well as milk products, are recommended in smaller quantities, while fats and other oils are recommended for use only sparingly.

Key elements of the current food guide pyramid include:

- Identification of six food groups: grains, fruits, vegetables, protein sources, dairy products, and fats, oils, and sweets.
- The grain group, at the base of the pyramid, is the group from which Americans should consume the



most number of servings per day. This new guideline coincides with scientific research that suggests that increased fiber, a compound primarily found in grains, can reduce the risk of chronic disease. Grain products contain a variety of other essential nutrients needed for proper growth and development as well.

- Fruits and vegetables are separate categories because each contributes specific nutrients needed by the body. For example, the vitamins they provide, vitamin A and C, have been shown to reduce the risk of some chronic diseases.
- Fats, oils, and sweets are placed at the top of the pyramid in the smallest space, to represent limited consumption. Most Americans eat diets that are too high in fat, especially saturated fat.

The food pyramid is designed to illustrate that no one food group is more or less important than another. It stresses *variety*, the importance of eating a selection of different foods from each of the major food groups every day; *proportion*, the relative amount of food to choose from each major food group; and *moderation*, eating fats, oils, and sweets sparingly.

The pyramid displays only the five food groups and recommended number of servings for each; it does *not* include the serving *sizes*. It is important to include information on age appropriate serving sizes when educating children and adolescents about the pyramid (see Exhibit 9-4).

Common Nutrition-Related Questions About Children's Food Consumption

Are some types of fat worse than others? Eating excessive amounts of any type of fat is not healthy. School-aged children should follow the dietary guidelines, which recommend that **no more than 30%** of calories be from fat and no more than 10% from saturated fat. Fats in foods contain some combination of the following three types of fatty acids: saturated, monounsaturated, and polyunsaturated.

Saturated fats, found primarily in animal meat and dairy products and in some vegetable fats such as coconut, palm, and palm kernel oils, have been shown to raise blood cholesterol levels in many people, thereby increasing their risk for heart disease. **Mono-unsaturated fats** are found mainly in olive, peanut, and canola oils. **Polyunsaturated fats** are found mainly in safflower, sunflower, corn, soybean, and cottonseed oils, and some fish. These two types of fat are believed to lower cholesterol in the body.

Another recent concern involves **trans fatty acids**, which occur naturally in some animal fats. Such fats also result from hydrogenation of vegetable oils. Some studies have shown trans fatty acids to act like saturated fat in the body, causing a rise in low density lipoproteins (LDL), the "bad" cholesterol, and a decrease in high-density lipoproteins (HDL), the cholesterol that protects against heart disease.



Should we worry about children's cholesterol level? Too much cholesterol, a fatlike substance present in all animal foods (meat, poultry, fish, milk and milk products, and egg yolks), can be harmful. It has been tied to coronary heart disease. Children should limit their intake of foods high in cholesterol. Studies have shown children as young as 7 years old have fatty streaks on the walls of their blood vessels, which is the first stage of coronary heart disease. (For information on cholesterol screening, see Chapter 5.)

Is sugar harmful to children's health? Too much sugar intake increases calorie intake, which can contribute to obesity. Foods that are high in sugar are often high in fat. Sugar is also strongly associated with tooth decay. (See Chapter 15 on oral health.) The single greatest contributor of sugar today is soft drinks. Candy, baked goods and certain "fast foods" also contain high amounts of sugar.

Should children give up salt? High-salt diets may affect the development of high blood pressure, especially in people with a family background of hypertension (high blood pressure). Nearly one in four Americans has high blood pressure which increases risk for heart attack, stroke, and kidney disease. (See Chapter 5 for information on blood pressure assessment.) Sodium is essential to health; however, most Americans consume far too much. Health authorities recommend that children's sodium intake be 300 to 400 mg less than the recommended adult amount of 2,400 milligrams a day (the equivalent of one teaspoon of salt).

Is fiber something children need to be concerned about? Because young children often have trouble with constipation, an adequate intake of fiber helps to control it. Fiber absorbs water, makes stools softer, and makes elimination easier. Some types of fiber have been shown to lower blood cholesterol. There are different types of fiber, which serve different functions in the body. The recommended fiber intake for children is 0.5 gm dietary fiber per kilogram to a maximum of 35 gms. This is the equivalent of 10 gm for a child weighing 44 lbs or 23 grams for a teen weighing 101 pounds. Children who are not used to eating a high fiber diet should increase their fiber intake in small amounts, as they may experience gas, diarrhea or bloating if too much fiber is taken in too quickly. Fluids should also be increased when increasing fiber intake. Exhibit 9-5 shows the amount of dietary fiber in various foods.

How much milk should children drink? School-aged children need 800 mg; adolescents need 1200 mg of calcium daily. Dairy products have the highest concentration of calcium per serving. Low fat (either 1% or 2%) milk is preferable to whole milk. As children become older, they often substitute soft drinks for milk; this is of special concern because the adolescent period is a critical time for bone formation. Most soft drinks contain the mineral phosphorus, and dietary intake of it interferes with the body's ability to absorb calcium. Exhibit 9-6 lists the calcium content of certain foods.

Are vegetarian diets okay for children? A well-planned vegetarian diet can provide all the nutrients a child needs for growth and



activity. Vegetarian diets have many positive health benefits. They are often high in fiber and low in cholesterol and saturated fat. The concern about having children on vegetarian diets comes when they are put on a strict vegetarian diet (vegan diet), which does not allow any animal products. A vegan diet may not provide enough of the necessary vitamins, minerals, and energy that a growing child/adolescent needs. Children on vegan diets should have their diets analyzed by a qualified nutritionist.

Should children take vitamin supplements? Children who eat a well-balanced diet should have no need for vitamin supplements. Relying on vitamins instead of a balanced diet eliminates many non-nutrient constituents of foods such as fiber and disease-fighting phytochemicals found in fruits and vegetables. The American Academy of Pediatrics has identified the following groups for whom vitamin supplementation could be appropriate:

- Abused and/or neglected children, or those otherwise living in deprived circumstances.
- Children with anorexia or bulimia, poor or eccentric appetites, poor eating habits, and those who are on regimens to manage obesity.
- Pregnant teenagers.
- Children who consume vegan diets.

FACTORS INFLUENCING EATING BEHAVIORS

Family and environmental factors — school, cultural influences, television and other media, and economic circumstances — influence children's eating patterns. Evidence continues to accumulate suggesting that the dietary patterns learned and practiced throughout childhood and the teen years affect health later in life.

Families play a crucial role in helping children and adolescents have adequate nutritional intake, and they also strongly influence children's food preferences. Parents can motivate their children and adolescents to establish healthful eating habits by allowing them increased responsibility and choice within a range of nutritious foods. This approach provides subtle nutrition education through learned experiences. It is an important and necessary part of health promotion and disease prevention.

Following are guidelines for parents in influencing their children's diets:

- Be a positive role model by serving and eating nutritious meals.
- Introduce food changes gradually. Sudden and extreme changes are not readily accepted by children.
- Avoid categorizing particular foods as "bad" or "good." It is the quality of the total diet over the long term that influences health, not one specific food or meal.



CHAPTER 9

- Focus on the benefits of a diet that is varied and well balanced instead of concentrating on the negative aspects of a less-than-ideal diet. Children may develop unhealthy attitudes about food and/or the possibility of weight gain which can contribute to eating disorders.
- Aim to have regular meal patterns including breakfast every day.

Although adolescents continue to be influenced by their families in what they eat, they generally spend more time away from their families than do children. They socialize more, are more influenced by their peers, and they are making an increasing number of choices on their own. This burgeoning independence of adolescents is often characterized by the following trends in eating behaviors:

- *Irregular meals.* The meal patterns of many adolescents are often erratic. They may skip meals, prioritize social activities over eating, and be fearful of unwanted weight gain. Breakfast and lunch are the meals most often missed by teenagers. Skipping breakfast has been associated with a less than adequate nutrient intake and a reduced ability to concentrate.
- *Snacking.* Snacking is a way of life for the majority of adolescents. Snacks may contribute 30% or more of an adolescent's total caloric intake and as much as 20% of their vitamin and mineral intake daily. Nutritious snacks can make a favorable contribution to the total nutrient content of the diet, especially nutrients such as calcium and iron that are most likely to be neglected in a typical adolescent diet. For those adolescents in the midst of a growth spurt and/or who are physically active, between-meal snacks may be the only means of obtaining calories sufficient to meet their increased energy requirements. The quality and quantity of snacks determines whether or not a positive contribution is being made to an adolescent's diet.
- *Eating in fast food restaurants.* As adolescents get older, meals eaten away from home make up a greater proportion of overall energy intake. Fast food restaurants, one of the most popular sites for adolescents' meals, provide them with a comfortable atmosphere for social gatherings and offer quick service and inexpensive food items. Although many fast food restaurants have begun to offer more nutritious alternatives, the majority of foods available are high in fat, sugar, and salt. Fast foods are regarded as nutritionally acceptable when they are eaten in moderation as part of a nutritionally sound, well-balanced diet, not as the mainstay of an adolescent's diet.



- *Vegetarianism.* Teens may choose to become vegetarians for religious, physiological or economic reasons. An estimated 5% of all Americans consider themselves vegetarians. Vegetarian diets vary and can be classified into six different categories:

Vegan avoids *all* foods from animal origin

Lacto-vegetarian includes dairy products

Ovo-vegetarian includes eggs

Lacto-ovo-vegetarian includes dairy products and eggs

Pesco-vegetarian includes dairy products, eggs, and fish

Semi-vegetarian includes dairy products, eggs, fish, and chicken

Eating patterns associated with vegetarianism may have specific health benefits. Foods consumed tend to be higher in fiber and complex carbohydrates and lower in fat. If the diet is well planned, nutrient intake should be sufficient. However, strict vegetarians who avoid all foods of animal origin may have more difficulty getting the necessary nutrients they need. The major nutrients for potential deficiencies are vitamins B₂, B₁₂, and D and the minerals calcium, iron, and zinc. B₁₂ is especially important for persons on vegan diets because it is available only in animal products. Children who are on strict vegetarian diets should have their diets analyzed to ensure they are getting all the nutrients necessary for proper growth and development.

Television is another influence on the eating habits of children and adolescents. Television advertisements may have a profound impact on children's attitudes toward food and their requests for certain products. Research over the past 25 years has found that excessive television viewing can be harmful to a child's growth and development by promoting a sedentary life-style, which can lead to obesity. The association between obesity and the amount of time spent watching television by children ages 6 to 11 has been well documented, and research has found that the majority of between-meal snacking on high-fat, sodium, and empty-calorie foods occurs while watching television.

CURRENT NUTRITIONAL ISSUES

When a child or adolescent is nutritionally jeopardized, growth and overall physical and mental health can deteriorate. Therefore, monitoring growth and making appropriate nutrition interventions are essential for ensuring the health of children and adolescents. What follows are common nutritional issues for children and adolescents.

Iron Deficiency Anemia

Iron deficiency anemia, one of the most prevalent nutrition problems in the United States, affects children at all income levels but is especially common among poor children. In monitoring programs for preschoolers attending Head Start programs, MDPH found that the number of children with iron deficiency anemia increased by 50% between 1988 and 1990.



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Iron deficiency anemia is defined as a decreased ability to carry oxygen in the blood to organs and tissues. It does not develop until all storage of iron has been used up and changes are seen in red blood cells (RBC). Children can be tested for anemia by having a hematocrit (hct) or hemoglobin (hgb) blood test.

Symptoms include anorexia, fatigue, and a decrease in attention span, strength, and learning abilities. The effects on learning and behavior are similar to those of mild to moderate undernutrition. Even mild cases lead to shortened attention span, irritability, fatigue, and a decrease in the ability to concentrate. Anemic children are known to do poorly on vocabulary, reading, math, problem-solving, and psychological tests.

The best way to prevent iron deficiency anemia is to make sure that children are getting enough iron-rich foods in their diets. The RDA for children varies by age. Children ages 4 to 10 need about 10 mg of iron daily; adolescent males and females (11–18 years old) need 12 mg and 15 mg daily, respectively. The best sources of dietary iron are listed in Exhibit 9-7.

Lead

Lead is a great hazard for children and is primarily found in paint and soil. Children who play outside can contaminate themselves by eating dirt or food with soiled hands or breathing dust that has lead particles. Deficiencies in calcium, iron, zinc, protein, and fat, as well as general malnutrition increase the chances of lead toxicity.

Screening for lead toxicity in young children can prevent irreversible physiological damage and fatality. Careful dietary assessment that includes an assessment of pica habits (the eating of nonfood items) and living environment can also be used to detect lead poisoning. (See Chapter 4 for information on lead in water and Chapter 5 for information on lead screening.)

Obesity

Obesity, defined as 120% or more of ideal body weight, is a major health concern. It is one of the leading causes of morbidity and mortality, predisposing adults to greater risks of hypertension, heart disease, diabetes mellitus, cancer, and other degenerative diseases. Estimates from nationwide studies reveal 25 to 30% obesity in 6 to 11 year olds and 18 to 25% obesity in 12 to 17 year olds. Many obese children become obese adolescents and adults. In addition, obese children and adolescents are at a greater risk of developing disordered eating patterns than normal individuals.

The causes of obesity are complex and not completely understood, but it is known that both genetic and environmental factors are involved. For instance, a child who has one or two parents who are obese has a 40 to 80% chance of being obese, whereas a child with no obese parents has only about 10% chance of being obese. Environmental factors that influence weight gain include cultural habits, parental supervision of diet, attitudes toward food, and inactivity. Obese children may not eat more than their normal weight peers but may be much less active. Excessive television viewing has been strongly correlated with obesity as well.

The effects of obesity may also have an emotional impact. Society teaches children that fat is bad and thin is good. Fat children may



be stigmatized and be seen as having a lack of self-control. They may be ridiculed and picked on by their peers. Studies have shown discrimination against fat people who apply for jobs and admission to organizations or colleges. The child who is made to feel bad about his or her body size will ultimately learn to develop poor self-esteem and learn to dislike himself or herself. As the child matures, he or she may fall victim to a cycle of weight loss attempts that can ultimately end in a life-threatening eating disorder.

Schools can:

- Educate teachers, parents, and children about stages of growth and the full range of body sizes and shapes.
- Teach children to love themselves regardless of their body type and build their self-esteem.
- Support weight maintenance and encourage the child to “grow into” his or her weight.
- Encourage participation in school and home exercise programs.
- Educate about healthy eating patterns, using appropriate nutrition education materials.
- Ensure that foods provided through the school food programs are low-fat and low-sugar healthy food choices.

Eating Disorders

There is a spectrum of eating disorders which have underlying psychological characteristics as well as common physical characteristics. The disorders are extremely complex. They are believed to involve a combination of biological, psychological, and social factors, which create a disturbance in eating attitudes and behaviors. The disorders, which can be precipitated by a stressful life situation, are thought to be the result of a subconscious attempt to exert control over a life that may seem out of control. Exhibit 9-8 lists some of the common behaviors associated with disordered eating patterns.

Athletes are found to be particularly at risk for eating disorders. Sports that emphasize a very slender body such as ballet, gymnastics, and long-distance running can lead a youngster to decrease food intake for optimum performance when extra nutrients are actually needed. Participation in sports such as wrestling, which require competitors to maintain a prescribed weight, can lead to eating disorders. (See section on **Nutritional Needs of Adolescent Athletes** later in this chapter.)

Girls are nine times more likely than boys to be affected by eating disorders. Males comprise approximately 5% of cases. The risk periods for eating disorders are between 14 and 15 years of age (the transition period into adolescence) and 18 and 19 years (the transition into adulthood), although they can start as early as age 9. It is estimated that about 1 million teenagers are affected by anorexia nervosa or bulimia nervosa.



Anorexia nervosa is clinically defined as an intense fear of fatness and obesity, extreme weight loss (more than 25% ideal body weight), amenorrhea, and distorted body image. There are two types of anorectics: the restrictive anorectic, who is constantly fasting or eating small amounts of food; and the bulimic anorectic, who fasts, engages in excessive eating, and induces vomiting to eliminate the food. It is conservatively estimated that 4% of 13 to 18 year olds have symptoms of anorexia nervosa.

Anorexia nervosa is a serious disorder. A girl can literally be starving herself to death and still see herself as fat. Extended periods of nutrient deficiencies can have irreversible effects including muscle wasting and osteoporosis (weak bones caused by inadequate calcium intake). The mortality rate for anorexia nervosa ranges from 5 to 20%. Other associated health problems are amenorrhea, hormone imbalances, lowered basal metabolic rate, cold intolerance, anemia, pallor, dry skin, constipation, hypotension, bradycardia, growth of downy hair over the entire body, sleep disturbances, electrolyte imbalance, dehydration, and dental caries.

Bulimia nervosa is more common than anorexia nervosa. This disease is characterized by repeated episodes of binge eating followed by feelings of depression and self-induced vomiting, use of diuretics, laxatives, dieting or rigorous exercise. Bulimia is harder to detect than anorexia nervosa because women who are bulimic typically go to unusual lengths to hide the behaviors. In addition, many bulimics tend to be within a normal weight range. Eight percent (8%) of 14 to 24 year olds are estimated to have symptoms of bulimia. The hazards associated with bulimia nervosa include electrolyte and fluid imbalances, anemia, tears in the lower esophagus, difficulty swallowing, swollen salivary glands, and dental caries.

Chronic dieting is a type of disordered eating pattern. It is described as ongoing, constant dieting behavior. The behavior may be cyclical, often comprised of fasting and overeating, or may be an obsession with “get thin fast” diet products. This type of dieting behavior typically results in little or no permanent weight loss.

Limited and restricted food intake can lead to an increased risk for nutritional deficiencies and compromise growth and development. There is an increased risk for long-term metabolic disorders due to periods of induced starvation offset by overeating. Individuals may become emotionally frustrated and view food as “the enemy,” resulting in a distorted relationship with food and an increased risk of becoming a true anorectic or bulimic.

Schools can:

- Ensure that positive body image is discussed as part of a nutrition/health education class. Stress a healthy, strong body type as the desired image and the importance of adequate nutrient intake as a means to achieve this.
- Identify psychological motives for weight loss. Students should be referred to a counselor when appropriate.



- Encourage healthy eating habits through the food service program and classroom activities.
- Provide healthy nutritious foods through the school breakfast and lunch program.
- Have available appropriate nutrition education materials to reinforce healthy eating patterns.
- Encourage physical activity and participation in school exercise programs as alternatives to dieting.
- Refer students to a weight loss support group if offered at community centers or the neighborhood health center.
- Initiate a support program in school for students who are chronically dieting.
- Be cognizant of danger signs for nutrition-related problems.

Food Allergies

Food allergies are an immune response to an allergy-producing substance. When the offending food is eaten, the body releases antibodies to attack it, and the immune system releases chemicals that irritate body tissues and trigger reactions immediately (within 2 hours) or later (2–4 hours): diarrhea, vomiting, malabsorption, abdominal pain, eczema, irritability, hyperactivity, rhinitis, anaphylactic reactions, and even death. Foods commonly associated with food allergies are milk, wheat, eggs, shellfish, and nuts. (See chapter 2 for emergency care planning.)

Individuals suffering allergic reactions to food may develop an emotional aversion to food resulting in a decreased amount and variety of foods they are willing to eat. Offending foods containing food allergens are not likely to be replaced with foods having nutrient equivalents, resulting in increased risk of nutritional deficiencies in vitamins, minerals, and a decrease in energy.

Schools can:

- Provide regular nutritional assessments which include growth monitoring.
- Ensure that nutritional needs are being met through exposing students to a variety of food choices.
- Help students identify appropriate nonallergenic foods.
- If a food allergy is suspected, refer to primary health care provider for a work-up.
- Work with parents to ensure an adequate diet is provided in the home.

Lactose Intolerance

Lactose intolerance is found in 70 to 95% of the African-American and Asian population and 10 to 15% of Caucasians. Lactose intolerance is the inability (or limited ability) to metabolize disaccharide lactose which is found in all dairy products or food products pre-



pared with dairy products. Symptoms include flatulence, bloating, abdominal cramping and diarrhea. Individuals with lactose intolerance face an increased risk of nutrient deficiencies, specifically vitamin A and D, calcium, and riboflavin, and increased risk of bone disease in childhood and adult life, such as rickets and osteoporosis.

Schools can:

- Encourage consumption of fermented lactose products such as cheese, yogurt, and buttermilk to supply calcium and vitamins D and A.
- With permission of a primary care provider, recommend the use of lactaid milk or a packaged lactaid enzyme to aid in lactose digestion.
- Monitor the child or teen for vitamin D and calcium deficiencies, and provide alternative sources of calcium in lunchroom menu.
- Identify foods in the school cafeteria that have hidden sources of lactose or dairy products such as cream soups and baked goods.
- Refer the child or adolescent for nutrition consultation and assessment.

Drugs and Alcohol

Marijuana and alcoholic beverages are the two most commonly used and abused substances of the school-aged population. (See Chapter 14.) The degree to which nutritional health is compromised is directly correlated with frequency of consumption.

Folic acid and vitamins B12, B6, and B1 are common nutrient deficiencies seen in alcohol users. Alcohol also has a toxic effect on the gastrointestinal tract and may result in malabsorption of nutrients. Marijuana alters the senses and may heighten appetite, but nonnutritive and sweet foods are generally craved, resulting in excessive intakes of these types of foods. Hard drugs may cause a user to become preoccupied with the substance of choice which may in turn cause him/her to forget to eat. A chronic decrease in nutrient-energy intake will compromise health status and growth.

Schools can:

- Refer identified users of alcohol, marijuana or hard drugs to a comprehensive drug treatment program.
- Educate students about drugs and alcohol, including their negative nutritional impact.
- Reinforce information with age-appropriate handouts and activities.
- Develop prevention groups in the school or community.
- Support healthy eating behaviors through nutrition education activities in school settings.



Tobacco

Tobacco use may depress appetite, increase serum cholesterol, skew cholesterol screening used on students at risk for coronary heart disease, and decrease serum vitamin C levels, which can compromise the immune system as well as wound healing and tissue development. (See Chapter 14)

Schools can:

- Educate students about the long-term complications of tobacco use.
- Contact the MDPH Tobacco Control Program, the American Cancer Society, and other antitobacco agencies for resources on education.
- Monitor weight and growth status to ensure that students are getting adequate nutrition for growth.
- Encourage healthy eating patterns through nutrition education activities at school.
- Distribute nutrition handouts to reinforce health education and anti-smoking messages.

Hyperactivity

Hyperactivity is prevalent in 3 to 5% of school-aged children, with boys being more affected than girls. Learning disabilities or attention deficit disorders (ADD) are often associated with hyperactivity. (See Chapter 11.)

There is no proven or consistent link between ADD and diet. While for some families, diet alteration has been helpful, it remains unclear as to whether or not the benefit is from a change in psychodynamics of the family or from a change of nutrients in the diet. The Feingold diet, for example, recommends omitting foods and products that contain salicylate, such as certain fruits, ice cream and candies, certain beverages, medicines, perfumes, and toothpastes.

However, therapeutic diets typically limit variety of food choices which can increase the risk of nutritional deficiencies. A side effect of medication is decreased appetite leading to weight loss. A long-term side effect of the ADD medication Ritalin may be linear growth suppression.

Schools can:

- Monitor students for nutritional deficiencies.
- Help students identify foods on the therapeutic diet and offered in the school breakfast or lunch program.
- To offset anorexia associated with medication, administer medication with meals (with primary care provider's permission) and offer high-caloric, nutrient-rich foods as snacks such as peanut butter and crackers, between meals.
- Monitor growth status and contact primary health providers when no or slow growth occurs.



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Family Stress

Stress experienced by children and adolescents (as well as that experienced by their parents or guardians) can affect eating behavior. If the home environment is stressful or the parent-child relationship is one of continuous struggle, dietary intake may be affected, resulting in nutritional disorders.

A child or teen undergoing stress may display a disinterest in food and decreased appetite, may begin to have unusual eating patterns, or may develop eating disorders or an unhealthy relationship with food.

Schools can:

- Educate staff to recognize signs and symptoms of eating disorders.
- Work with families to help identify problems that may be at the root of an eating disorder.
- Identify and recommend appropriate social services.
- Help students to cope emotionally with stress by providing peer support groups to discuss stress and its relationship to food intake.
- Address nutrient deficiencies identified by primary care providers and reinforce with nutrition education.
- Educate families about the role they play in optimizing the nutritional health of their children.
- Encourage good nutrition and healthy food intake to support catch-up growth (if needed) as well as ongoing growth and development throughout childhood and puberty.

Hunger

Poverty is the root cause of hunger and undernutrition, and both are experienced by children in the United States. A survey of hunger in Massachusetts conducted in 1991 estimated there were 200,000 poor children in the Commonwealth under the age of 12 hungry or at risk of being hungry.

It is difficult to isolate hunger from other factors that might have a negative impact on learning and behavior. Hunger is known to have an independent effect on learning and behavior, however, and its effects are even worse if coupled with chronic undernutrition. The consensus of researchers is that during periods of undernutrition, learning is slowed considerably. Significant side effects include:

- excessive irritability
- low attentiveness
- apathy
- lack of social stimulation
- low curiosity

- anxiety
- low physical activity
- increased hostility
- inability to concentrate well
- lessened independence
- fatigue
- low tolerance to frustration
- impaired ability to elicit effective and supportive stimulation from social environment

Such effects as these can profoundly affect school performance. Research indicates that the brain can be significantly affected by long-term fasting or hunger. Skipping breakfast, for example, has been shown to affect children's performance negatively in problem-solving situations similar to ones faced in a classroom.

Making sure children are properly fed, therefore, can be a vital investment in a child's scholastic performance and future success. Teachers, school officials, and other school personnel can support healthy food choices through nutrition education. School feeding programs are known to improve a child's learning ability, provide substantial amounts of a child's daily nutrient needs, and decrease the rate of tardiness and absenteeism.

NUTRITIONAL CONCERNS OF CHILDREN WITH SPECIAL HEALTH CARE NEEDS

Children with "special health care needs" comprise 10 to 20% of the youth population. They have a variety of disabilities, handicaps, and chronic illnesses: neurological disorders such as cerebral palsy, congenital anomalies such as a cleft palate, metabolic disorders such as diabetes mellitus, infectious diseases such as AIDS, chronic diseases such as cancer, and gastrointestinal disorders such as Crohn's disease. (See Chapter 7.) Common problems include inadequate intake of calories and nutrients leading to malnutrition, poor growth and short stature, obesity, dental problems, anemia, and constipation. Malnutrition can adversely affect a child's ability to learn and her or his resistance to stress and disease. Early assessment of nutritional status followed by appropriate nutrition intervention and monitoring can prevent or minimize these conditions.

Nutritional problems of children and teens with special health care needs cover a wide range of areas. Feeding issues are frequently found in association with various medical conditions such as cerebral palsy (CP), Down syndrome, seizure disorders, and hypotonia (poor muscle tone). Other conditions that may place a child at nutritional risk include HIV/AIDS, asthma, diabetes, cystic fibrosis, heart disease, and other metabolic disorders (e.g., diabetes) or digestive disorders (e.g., celiac sprue, short gut).



Additionally, children and teens with developmental delay or limited cognitive skills may also be at risk for poor nutrition. If a child has developmental delays, feeding skills may also be delayed. It may take longer to bring the child or teen through the steps of sucking, swallowing, eating pureed foods, and chewing and swallowing solid foods.

One of the most common nutritional concerns (which is not diagnosis or disability specific) is inadequate intake of calories and nutrients due to a limited ability or inability to ingest, consume, or digest foods. This results in children who are underweight and experience poor growth. Alternatively, overweight or obesity can result from limited physical mobility or exercise, and/or inadequate diet. Dental problems, drug and nutrient interactions, constipation and/or diarrhea, behavioral issues, food allergies, or intolerances are other frequently identified concerns in children and teens with special health care needs.

Under federal legislation in the Individuals with Disabilities Education Act (IDEA), persons with special health care needs are to be integrated into the regular school environment, including participation in the school lunch and breakfast programs. School health staff can incorporate appropriate modifications or substitutions into the school lunch and/or breakfast meals to accommodate the special dietary needs of these children, ensure that nourishing meals are provided, and help to make mealtime a pleasant experience. Most children with special health care needs are under the care of a physician and dietitian who are available to work with the family and the child to discuss care and dietary guidelines. The following are nutritional concerns that may require extra support from school personnel.

Obesity

Helping children to learn healthy eating and exercise habits is the key to prevention of obesity. This may be more difficult for a child or teen with special health care needs, whose mobility may be limited by her or his disability. In addition to a healthful diet, children and teens with special health care needs should be encouraged to participate in physical activity programs within their ability. (See the **Obesity** section in this chapter and see also Chapter 5 for a discussion of height and weight screening.)

Growth Delays and Underweight

Some children with chronic illness, handicapping conditions, or special health care needs are underweight. The child or teen's nutritionist can work with the school nurse and food service personnel to develop individualized meal plans to encourage weight gain. Special dietary supplements may be prescribed by the physician or nutritionist to provide needed nutrients and calories not available through a regular diet. Some children and teens may need to take these supplements either orally or via a gastrostomy tube, administered by the parent or school health personnel.

Drug and Nutrient Interactions

Medications are prescribed for many conditions in students with special health care needs. Some medications cause unwanted side effects in addition to their beneficial effects and may interfere with food intake or nutrient absorption. It is important to know whether or not medications should be taken before or during meals and be able to identify any negative side effects.

Constipation or Diarrhea

Constipation in children or teens with special needs may be caused by a variety of factors, including inadequate or limited physical activity, over medication, digestive disorders, inadequate fiber or liquid intake, inadequate time for the child in the bathroom, and excessive water loss through drooling in children with oral motor problems. Some children and teens with special health care needs may have chronic diarrhea caused by medications or the requirements of a special diet. School health personnel should discuss a child's special needs with the family and physician or nutritionist so that the bowel habits and diet can be managed properly in the school setting.

Dental

Dental care for students with special needs is another area in which school health and food service personnel can be helpful. If tooth brushing is suggested during school hours, school health personnel may need to remind the child to brush after meals.

Inborn Errors of Metabolism and Other Metabolic Disorders

A child with phenylketonuria (PKU) or any other inborn error of metabolism needs to be on a carefully controlled diet in order to promote normal growth and development and ensure intake of adequate nutrients. Other metabolic conditions such as diabetes require only minor changes in the menu. Food for the child's meals and snacks is typically provided by the family or served only with the prior involvement of the child's family, physician, or dietitian.

Pediatric HIV/AIDS

Healthy foods and dietary supplements play an important role in helping a child with HIV/AIDS maintain weight, strength, and energy, and may help fight infections. During bouts with HIV illness, fever, diarrhea, nausea, and weight loss may occur, and a child may require a special diet and food supplements. School health personnel can work with the child's health care provider and nutritionist to develop and implement a proper nutritional plan.

Food Allergies and Intolerances

Some children and teens with special health care needs may experience food allergies or intolerances, the most common of which is lactose intolerance. The severity of the body's reaction to allergens, including food, can be minor or life threatening. (See previous sections in the chapter on **Food Allergies** and **Lactose Intolerance**.)

NUTRITIONAL NEEDS OF ADOLESCENT ATHLETES

Rigorous athletic training demands caloric intake over and above that necessary to support normal growth and the physical maturation associated with the pubertal growth spurt. Thus, adolescent athletes require specific nutritional support in order to sustain the physical stress of growth and development.

The amount of additional energy needed depends on the intensity, duration, and specific type of exercise. (See Chapter 10.) The majority of the additional calories required by these athletes to fuel muscles are best supplied by carbohydrate foods such as breads, cereals, pasta, dried beans and peas, fruits, and vegetables. Abnormally high levels of protein are not required and can lead to dehydration as the body rids itself of nitrogenous waste products. The need for protein, following an initial muscle building phase, is not much greater than that of the nonathlete. Approximately 2 to 3



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grams above the RDA will maintain nitrogen balance in most athletes. Increased demands for energy can be met by consuming larger quantities of high-quality foods and beverages. The recommended food intake guideline for athletes is:

Energy: RDA for age plus 800 to 1700 kcal/day per 2 hours of strenuous exercise.

Protein: 10–15% of total calories.

Carbohydrates: 50–55% of total calories.

Fat: 30% or less of total calories.

Vitamins/minerals: Should be met by eating a variety of foods.

Some athletes may limit food intake to the point of undernutrition in an effort to achieve “the competitive edge.” When undernutrition is coupled with intensive training, significant risk to proper growth and development can occur. Short-term effects may include chronic fatigue, hypoglycemia, and increased incidence of illness and heat exhaustion.

In young women, the long-term effects may include delayed menarche and amenorrhea (ceasing of menstrual period) which can impair skeletal growth and result in an increased risk of scoliosis, stress fractures, loss of potential stature, and osteoporosis later in life. In addition, sports that encourage low body fat or a lean physique (such as gymnastics or ballet) can place adolescents at an increased risk for undernutrition, and, in females especially, eating disorders.

Adolescent females who are athletes and amenorrheic should be referred to a primary care provider for dietary counseling. A change in the quality and quantity of the diet is a worthwhile first step for the amenorrheic athlete and should be initiated prior to the use of hormone therapy. Such young women may not be aware of their risk of osteoporosis later in life. Therefore, they should be informed about the risk of bone fractures and hypothermia when exercising in cold temperatures and encouraged to follow more appropriate healthful dietary practices.

Dehydration

Dehydration can lead to serious health consequences. The intensity and duration of a sports event, the environmental temperature, an individual's level of fitness, and the state of an individual's hydration prior to exercise will contribute to the extent of dehydration. Additionally, unsafe rapid weight loss (restricting fluids, purging, and diuretic use) can also play a role in dehydration. Repeated bouts of dehydration and rehydration — a practice common to wrestlers who compete according to weight class — are dangerous and may have a detrimental effect on the kidneys.

It is recommended that plenty of fluids be consumed before exertion and every 20 minutes or so during endurance activities. In warm weather, fluids should be replenished every 10 to 15 minutes. Plain cold water is the best fluid for rehydration. Electrolyte replacement formulas are not warranted unless the activity is particularly stressful and the heat is extreme.



Anabolic Steroids

A number of strength-trained athletes, particularly adolescent males who wish to increase strength and muscle mass, may experiment with anabolic steroids. These are synthetic versions of testosterone, the male hormone responsible for stimulating muscle growth. Approximately 7% of high school males and 3% of high school females have used anabolic steroids to enhance physical performance muscle mass.

Anabolic steroid use has known toxic effects. Short term, they can cause fatigue, rashes, and combative behavior, called “roid rages”. Over the long term, they can contribute to premature cardiovascular disease by lowering HDL cholesterol (the “good” cholesterol that carries cholesterol away from the arteries) and increasing LDL cholesterol (the “bad” cholesterol that is left behind in the arteries). They also contribute to the development of liver tumors.

The acute side effects of steroids include acne, baldness, breast growth, diminished libido, altered sexual function, and mood swings producing increased irritability or psychotic symptoms. These effects may present to the adolescent a more convincing argument against the use of steroids than an account of the long-term cardiovascular influences.

Protein Supplements and Other Food Fads

Athletes and their coaches are particularly vulnerable to food fads and nutrition myths that promise improved physical performance and a muscular build. The claim that additional vitamins and protein supplements will enhance athletic performance remains largely unsubstantiated.

While most protein supplements are made up of good-quality proteins, they are expensive, have no proven effect on performance, and do not increase muscle mass or strength. The use of protein supplements and vitamin/mineral preparations is generally not harmful, but implementing such practices at the expense of a nutritionally sound, well-balanced diet can adversely affect health and performance.

Young athletes who participate in contact sports, weight lifting, heavy weight wrestling, and long-distance cold water swimming may attempt to enhance their sports performance by increasing their body weight. Because they may consume excessive amounts of high-protein foods that are also high in saturated fat and cholesterol, they should be taught appropriate ways to increase their caloric intake without adding saturated fat and cholesterol to their diets.

Iron Deficiency and “Sports” Anemia

Athletes require more of the mineral iron when they are practicing or competing. If insufficient iron is consumed, they can develop “sports” anemia, which is characterized by a depressed hemoglobin and a reduction in oxygen-carrying capacity.

Iron deficiency anemia may occur in males during periods of rapid growth, but adolescent female athletes (especially black females) are at greater risk. It is recommended that female long-distance athletes (e.g., runners and swimmers) be screened for signs of nonanemic iron deficiency (e.g., normal hemoglobin, depressed serum ferritin, and transferrin) and for signs of iron deficiency anemia by hemoglobin and serum ferritin determination. If a transient iron



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deficiency goes unchecked, continued stress in a young, growing athlete can lead to a chronic form of anemia and may cause long-term health problems.

Role of the Teacher and Coach

Given the abundant misinformation about nutrition and the role it plays in sports performance, there is a great need for adolescents, coaches, teachers, school nurses, parents, and school officials to become well versed in nutrition education. School staff should learn effective counseling techniques to assist adolescent athletes in improving their dietary patterns by helping them to understand the important role nutrition plays in fitness and health. Adolescents participating in sports are typically a highly motivated group and are receptive to learning and applying proper nutrition.

NUTRITIONAL NEEDS OF PREGNANT ADOLESCENTS

Each year there are approximately 1.1 million births to teenagers nationwide, most of them unplanned. Pregnancy places great physical demands on a woman at any age; however, for a teenager, there are recognized additional risks. A pregnancy that comes at the same time as adolescent growth can compromise the growth of both the mother and baby. The nutritional status of a pregnant adolescent is closely linked to the future health of her baby. Many studies show teens to be the most poorly nourished Americans. If good nutritional habits are not well established before pregnancy, it becomes difficult for them to catch up once pregnant. The health of their babies is placed at risk by the problems associated with less access to adequate food and health care. Studies have demonstrated that poor teens have high rates of babies with low birth weight and prematurity.

Nutrient Needs

The additional energy and nutrients needed to meet the demands of pregnancy place the adolescent at increased nutritional risk. The RDA for pregnant women constitutes the most complete source of scientific information for determining nutrient intakes; however, RDAs do not address the possible increased needs of the pregnant adolescent who may still be growing. Moreover, RDAs may be inadequate for teens who enter pregnancy with a compromised nutritional status, chronic disease, or other complicating conditions.

Surveys indicate that the major nutrients deficient in a pregnant adolescent's diet are energy or total calories, vitamins A, B6, folic acid, riboflavin, calcium, iron and zinc. (Exhibit 9-9 displays the amounts of nutrients recommended for pregnant adolescents.)

Prenatal Supplements

With the exception of iron, adolescents should be able to obtain all their nutrient needs through a well-balanced diet. However, due to typically poor dietary habits, it is often recommended that adolescents take a prenatal multivitamin/mineral supplement when pregnant.

Role of Schools

Schools can:

- Facilitate continued access to school services during pregnancy.
- Provide credit for participating in a pregnancy and parenting course which incorporates nutrition education as it relates to pregnancy, delivery, and infant care.



- Facilitate access to medical care and nutritional services.
- Refer to community nutrition resources as needed.
- Develop support groups for pregnant and parenting teens in an environment that is supportive and non-judgmental.
- Help teen's parents identify day care resources or start a day care program in the school.
- Provide credit for learning about infant development and care.

FOOD IN THE SCHOOL ENVIRONMENT

The School Breakfast Program

School food service has a major impact on many school-aged children. Common to all school districts is the large number of children who depend on the school lunch and school breakfast programs for significant contributions to their daily diet.

The School Breakfast Program, which began with the passage of the federal Child Nutrition Act of 1966, helps give children a healthy start for the day's activities by providing a breakfast in school at a cost that most families can afford to pay. All public and nonprofit private schools as well as public and licensed nonprofit child care institutions are eligible to participate.

Beginning on September 1, 1986, state legislation mandated a breakfast program in certain public schools within the Commonwealth. Public schools required to have breakfast available are those in which 40% or more of the lunches served two years prior were served free or at a reduced price. Further, the school must have a combined total of 50 or more free and reduced-price meal applications as of October of the preceding school year. Federal funds are used to reimburse schools and institutions for free and reduced-price breakfasts. Additional state monies are available for mandated schools if the regular free and reduced-price breakfast reimbursement is insufficient to cover the cost of the School Breakfast Program.

The breakfast meal pattern is designed to give a child a good start toward meeting his or her daily nutritional needs. To meet the nutritional standards and be eligible for cash reimbursement, a school breakfast must offer at least one food option in each of these four food categories (See Exhibit 9-4 for serving sizes):

1. *Fluid milk*: $\frac{1}{2}$ pint served as a beverage and/or on cereal.
2. *Fruit/vegetable*: a $\frac{1}{2}$ -cup serving; or a $\frac{1}{2}$ cup full-strength fruit or vegetable juice.
3. *Bread/bread alternates*: Whole-grain or enriched bread, 1 slice; whole-grain or enriched biscuit, roll, muffin, 1 serving; whole-grain, enriched, or fortified cereal, $\frac{3}{4}$ cup or 1 ounce.



4. *Meat or meat alternates:* Lean meat, poultry, or fish, 1 ounce; cheese, 1 ounce; large egg; peanut butter or other nut or seed butters, 2 tablespoons; cooked dry beans and peas, 4 tablespoons; nuts and/or seeds, 1 ounce.

At a minimum, each breakfast must offer *one serving* of fluid milk and *one serving* of fruit/vegetable, *plus one of the following combinations:*

- two bread/bread alternates
- two meat/meat alternates
- one bread/bread alternate and 1 meat/meat alternate

School Lunch Program

Since 1946, the National School Lunch Program has made it possible for schools throughout the nation to serve nutritious, low-cost lunches to children each day. In 1975, the program was expanded to include residential child care institutions. The stated objective of the program is to safeguard the health and well-being of the nation's children and to encourage the consumption of nutritious agricultural commodities and other foods.

The school lunch program is a cooperative effort of federal, state, and local authorities. At the federal level, it is administered by the U.S. Department of Agriculture's Food and Nutrition Service. In Massachusetts, it is the responsibility of the MDOE through the Nutrition Programs and Services cluster. The local authority enters into an agreement with MDOE to conduct the program.

All public schools of high school grade or under (whether on single or double sessions) must make lunch available to their students. Participation on the part of nonprofit private schools and public and licensed nonprofit residential child care institutions is at the option of the local authority. Agencies must agree to:

- Operate the lunch program on a nonprofit basis for *all* children.
- Serve meals that meet the nutritional standards established by the U.S. Secretary of Agriculture and the Massachusetts Board of Education.
- Provide free or reduced-price meals to children whose families meet income eligibility criteria established by the U.S. Secretary of Agriculture (and such children must not be overtly identified or discriminated against in any way).
- Comply with the rules and regulations established by the Massachusetts Board of Education.

Federal and state funds are used to reimburse schools and institutions for costs related to the operation of the program. Additional funding is provided for meals served to needy children. State reimbursement funds are applied to all lunches served to children under the National School Lunch Program. Receipt of federal

monies is dependent on the appropriation of matching state revenues. In addition, the U.S. Department of Agriculture supports school districts with donated food products. Massachusetts' share of donated foods is dependent on the number of reimbursable meals served in the state, provided the school districts pay a token storage fee per case or unit and transportation costs from the state storage center to the receiving school.

Educational specialists are available through the Nutrition Programs and Services cluster of the MDOE to advise and assist in all phases of school lunch operations. In addition, MDOE supports and promotes nutrition education and improved school food services by conducting workshops, seminars, and conferences for teachers, school food service personnel, and other interested adults, publishing a quarterly newsletter, and developing education materials.

The school lunch pattern is designed to provide approximately one-third of the RDAs over a period of time for school-aged children. To be eligible for cash reimbursement, the lunch must include as a minimum (See Exhibit 9-4 for serving sizes):

1. *Fluid milk*: A choice of $\frac{1}{2}$ pint of fluid whole milk or unflavored lowfat milk served as a beverage.
2. *Meat or meat alternate*: Two ounces (edible portion as served) of lean meat, poultry or fish; or 2 ounces of cheese; or one egg; or $\frac{1}{2}$ cup of cooked dry beans or peas; or 4 tablespoons of peanut butter or other nut or seed butters; or an equivalent quantity of any combination of the these foods. In addition, peanuts, soy nuts, tree nuts, and seeds may be counted toward meeting 50% of the protein requirement. To meet this requirement, these foods must be served in a main dish or in a main dish and one other menu item.
3. *Fruit/vegetable*: Two or more servings of vegetable or fruit or both to total a $\frac{3}{4}$ cup serving. No more than one-half of the total requirement may be met with full-strength fruit or vegetable juice. Cooked dry beans or peas may be used as a meat alternate or as a vegetable alternate but not as both in the same meal.
4. *Bread/bread alternate*: One slice of whole-grain or enriched bread or its equivalent.

It is also recommended that foods rich in iron and vitamins A and C be served often. Students in senior high schools must be allowed to select only three of the required five items (milk, meat, 2 servings of fruit/vegetable, bread). At local option, elementary school children may be allowed to select three or four items. The meal patterns established by the U.S. Department of Agriculture set the basic nutrition standards for the meal programs. Initiatives to apply the Dietary Guidelines for Americans to these standards are underway at federal, state and local levels.



CHAPTER 9

Nutrition Improvement Initiatives

The MDOE, through its Nutrition Education and Training Program, is funding the development of a comprehensive five-week menu designed to provide the balance and variety suggested in the dietary guidelines and limit fat and sodium intake to recommended levels. Many local efforts have been established to reduce the fat, salt, and sugar in school meals through menu modifications, changes in preparation techniques, and demand for and reliance on nutrition specifications and analyses. At the national level, the Food and Nutrition Service of the USDA is proposing an initiative designed to ensure that school meal programs meet the dietary guidelines for Americans. It would take effect in 1998.

Nutrition Integrity In Schools

Schools are encouraged to establish nutrition integrity policies at the district level. The American School Food Service Association recommends that school districts establish policies that encompass the following concepts:

- Nutrition standards, based on scientific recommendations, will be adopted to set appropriate goals. Emphasis will be placed on eating a variety of foods with adequate dietary fiber and lower amounts of fat, sodium, and sugar in school meals.
- Student preferences will be considered in menu planning. Since foods must be eaten to provide nutrients, menu changes will be gradual to ensure acceptance.
- Meals will contain adequate calories and a variety of foods to support growth, development, and the maintenance of healthful body weight.
- The nutritional value of school meals will be evaluated over a period of days.
- Purchasing practices will be developed to ensure the use of high-quality ingredients and prepared products to maximize flavor and acceptance. School food service professionals will work with industry to develop appetizing and affordable products which meet nutrition standards.
- Foods will be prepared in ways that ensure a balance between optimal nutrition and student acceptance.
- Foods sold in addition to meals will be thoughtfully selected to ensure optimal nutrition quality and to foster healthful eating habits. These foods will be limited in number to prevent the separation of students who can and cannot afford additional purchases.

Foods Served at School Events

Schools are encouraged to extend the nutrition standards of the meal program to after-school events and fund raisers. In lieu of candy sales during school hours, students and faculty are encouraged to coordinate fund raisers with the school food service. The school food service director can assist those planning food-oriented fund-raising events such as community suppers, pancake breakfasts, and bake sales. Such collaboration results in successful



A la Carte and Vending Machine Sales

fundraising, positive public relations for the school food service, and a strong sense of school-community team work.

A la carte food sales (foods sold as individual components rather than complete meals made up of several components) and vending machine sales may be important supplemental income for some school food services. When schools find it necessary to supplement the meal program with a la carte or vending machine sales, they are encouraged to offer food items that support the nutritional integrity of the school meal programs (e.g., fresh fruit, low-fat yogurt, and popcorn).

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Boulder, CO 80321

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Additional Information, Materials, and Services

American Anorexia/Bulimia Association,
(212) 734-1114

American Cancer Society,
(800) 227-2345 or (617) 267-2650

American Diabetes Association,
(800) 232-3472

American Heart Association/Greater Boston,
(617) 449-5931

American Institute of Cancer Research,
(800) 843-8114

American Medical Association,
(312) 464-5000

Anorexia Bulimia Care,
(617) 492-7670

Center for Science in the Public Interest,
(202) 332-9110

Consumer Nutrition Hotline,
(800) 366-1655

Federation for Children with Special Needs,
(617) 482-2915

Food and Drug Administration,
(617) 279-1675

Food and Nutrition Service/USDA,
Northeast Region,
(617) 565-6380

Food and Nutrition Information Center,
(301) 504-5719

Human Nutrition Information Service/USDA,
(301) 436-8498

International Center for Sports Nutrition,
(402) 559-5505

La Leche League International, (703) 455-7730



CHAPTER 9

March of Dimes Birth Defects Foundation,
(914) 428-7100 or (617) 329-4930

Massachusetts Dietetic Association,
(617) 527-3560

National Association of Anorexia
and Associated Disorders,
(708) 831-3438

National Cancer Institute-
Cancer Information Line,
(800) 4-Cancer

National Center for Education in
Maternal and Child Health,
(202) 625-8404

National Heart, Lung and Blood Institute,
(301) 951-3260

New England Dairy and Food Council,
(617) 734-6750

Nutrition Education and Training
(Department of Education)
(617) 388-3300 ext. 479

Office of Nutrition,
Massachusetts Department of Public Health,
(617) 727-9283

Office for Substance Abuse Prevention,
(800) 729-6686

UMass Cooperative Extension System,
(413) 545-0552

WIC: Supplemental Food for
Women, Infants and Children,
(800) WIC-1007

Legislation

National School Lunch Act (P.L. 79-396, 1946)

Child Nutrition Act (P.L. 89-642, 1966)

U.S. Department of Agriculture, Food and Nutrition Service, Child
Nutrition Regulations (7 CFR 210 245) (1992).



EXHIBIT 9-1

Sample Nutritional Assessment

Growth Measurements

- Is the weight for height *at or above* the 95th percentile?
- Is the weight for height *at or below* the 10th percentile?
- Is the height for age *at or below* the 5th percentile?
- Is there an abnormal growth pattern (no increase in weight, no increase in height, decrease or increase of more than 2 major percentiles, flattened growth curve)?
- Is the student failing to thrive?

Health Status

- Does the student have a congenital anomaly that impairs feeding or utilization of nutrients?
- Is the student developmentally delayed or does she or he have a disability that causes feeding difficulties?
- Does the student have a food allergy or food intolerance?
- Is the student experiencing GI disturbances (constipation, diarrhea, bloating, stomach pain, or vomiting)?
- Does the student have a medical condition that affects nutritional status or whose treatment includes diet modification (e.g. diabetes, hypertension, AIDS/HIV, TB, hyperlipidemia, or cystic fibrosis)?
- Has the student been on prolonged use of a medication that interferes with nutrient absorption or has an effect on appetite?
- Does the student have an eating disorder such as anorexia nervosa, bulimia, or pica?
- Is the student physically active?

Biochemical

- Does the student have low blood iron status or anemia?
- Does the student have an elevated blood lead level?
- Does the student have high blood cholesterol levels?
- Are there other biochemical indicators or clinical signs of malnutrition?

Psychosocial

- Is the student or family experiencing problems accessing food? Do they have inadequate facilities for food preparation or food storage?



- Who is responsible for purchasing and preparing food in the household?
- What are their skills with regard to selection and preparation of healthy foods?
- What is their knowledge with regard to proper storage and handling of foods to avoid foodborne illnesses?
- Does the student know about available community food resources (WIC, Food Stamps, AFDC, or SHARE program)?
- Is the student experiencing stress at home (family illness, death, or marital problems)?
- Is there adequate time for eating meals at home (especially breakfast)?

Eating Patterns

- What is the student's typical daily/weekend food intake? Does he or she follow the dietary guidelines?
- Is the student eating foods too high in fat, sugar, or salt on a regular basis?
- Is the student practicing unhealthy weight loss or gain methods (i.e. use of diuretics, purging, smoking, use of steroids, or laxatives)?
- Is the student on a restrictive diet (i.e. intake of limited foods or vegan diet)?

Pregnant and Parenting Teen

All of the above questions apply to the pregnant teen. In addition, the following questions should be considered:

- Is she gaining sufficient weight/too much weight?
- Does she smoke/take drugs?
- Is she experiencing specific discomforts which affect her ability to take in adequate food?
- Does she need breastfeeding counseling or support?
- Is she knowledgeable about feeding her child?



EXHIBIT 9-2

Key Nutrients in Food

	Important Functions	Food Sources
Fat soluble		
Vitamin A	Helps keep skin clear and smooth; helps keep mucous membranes firm and resistant to infection; promotes normal vision in dim light; helps promote bone growth	Liver, egg yolk, dark green and orange vegetables, yellowish-pink fruits such as cantaloupe or peaches, butter, margarine, milk, cream, hard cheese, ice cream
Vitamin D	Helps the body absorb calcium and phosphorus in the building of bones and teeth	Vitamin D fortified milk, fish liver oils, egg yolk
Vitamin E	Protects cell membranes from damage; prevents destruction of fats in the body and in food	Meat, eggs, vegetable oils, green leafy vegetables, whole grain cereals, wheat germ
Vitamin K	Maintains normal clotting of the blood	Pork, liver, egg yolk, leafy green vegetables, cauliflower
Water Soluble		
Thiamin (vitamin B ₁)	Promotes normal appetite and digestion; keeps nervous system healthy and prevents irritability; helps body release energy from carbohydrates and fats in food	Liver, meat (esp. pork), fish, poultry, eggs, enriched or whole grain breads and cereals, dried peas and beans, potatoes, broccoli, green leafy vegetables
Riboflavin (vitamin B ₂)	Helps cells use oxygen; releases energy from carbohydrates and fats in foods; helps maintain good vision and smooth skin	Dairy products, meats (esp. organ meats), fish, leafy green vegetables, broccoli, eggs, whole grain breads and cereals
Niacin	Helps keep nervous system healthy; keeps skin, mouth, tongue, and digestive tract in healthy condition; helps body release energy from carbohydrates and fats in foods	Peanut butter, meat, liver, fish, poultry, enriched or whole grain breads and cereals, dried beans & peas, green vegetables
Pyridoxine (vitamin B ₆)	Helps nervous tissues function normally; plays role in red blood cell regeneration; involved in the metabolism of amino acids, fats and carbohydrates	Liver, pork, ham, salmon, soybeans, lima beans, bananas, yeast, whole grain cereals and breads, egg yolks, vegetables
Folic acid (folic acid)	Helps cure (and prevent) megaloblastic anemia; helps enzyme and other biochemical systems function normally; required for DNA metabolism; helps prevent neural tube defects in newborns	Green leafy vegetables, lima beans, broccoli, liver, kidney, whole-grain cereals; dried beans and peas
Cobalamin (vitamin B ₁₂)	Assists in red blood cell formation; protects against the development of pernicious anemia; maintains healthy nerves	Eggs, fish, liver, kidney, other meats, milk and milk products
Ascorbic Acid (vitamin C)	Helps bind cells together and make walls of blood vessels firm; promotes healing of wounds and broken bones; helps body resist infections; helps tissues such as gums and teeth stay healthy	Citrus fruits (orange, grapefruit, lemon, lime), strawberries, cantaloupe, melons, tomatoes, green peppers, broccoli, green leafy vegetables, cabbage, potatoes



CHAPTER 9

EXHIBIT 9-2

Key Nutrients in Food (continued)

	Important Functions	Food Sources
Minerals		
Calcium	Helps build bones and teeth; helps blood to clot; helps muscles, nerves, and heart to work; helps regulate the use of other minerals in the body	Milk and milk products (low amounts in cottage cheese), dark-green leafy vegetables, salmon, sardines, other fish with edible bones, tofu (soy-bean curd), soybeans, other legumes
Phosphorus	Combines with protein to make hemoglobin, the red substance in the blood that carries oxygen to the cells; needed to prevent iron deficiency anemia (iron deficiency impairs the ability to concentrate, increases irritability, causes fatigue, and is related to increased lead blood levels)	Liver, fish, poultry, eggs, milk and milk products, whole grain cereals, nuts, dried beans and peas
Iron	Protects cell membranes from damage; prevents destruction of fats in the body and in food	Red meat, liver, kidney, poultry, oysters, dried beans and peas, other legumes, dark green leafy vegetables, prunes, raisins, dried apricots, fortified, enriched, or whole grain breads and cereals, molasses
Iodine	Helps the thyroid gland control the rate at which the body uses energy; prevents some forms of goiter	Seafood, iodized salt
Zinc	Important for protein synthesis and growth and development	Seafood, meat and eggs, legumes, and whole grains
Other Nutrients		
Protein	Maintains existing tissue and allows for optimal growth of body tissue; builds antibodies to fight infection; part of hormones and enzymes responsible for regulating body functions such as digestion and growth	Meat, chicken, fish, tofu, soybeans, other legumes, whole grains, nuts, milk and milk products
Carbohydrates	Supplies energy; carries other nutrients present in foods; provides fiber, which assists in the elimination of body waste	Breads and cereals, potatoes, lima beans, corn, dried beans and peas, rice, pasta, dried fruits, sugar and sweets
Fats	Supplies large amount of energy in small amount of food and; supply essential fatty acids; carries fat-soluble vitamins A, D, E, K; needed for healthy skin	Butter, margarine, shortenings, oils, visible fat in meats, butterfat in milk and cream, nuts and seeds, chocolate
Water	Important in all cells and body fluids; regulates body temperature; transports nutrients to cells and carries waste away	Water, beverages such as juice, milk, soups, fruits and vegetables

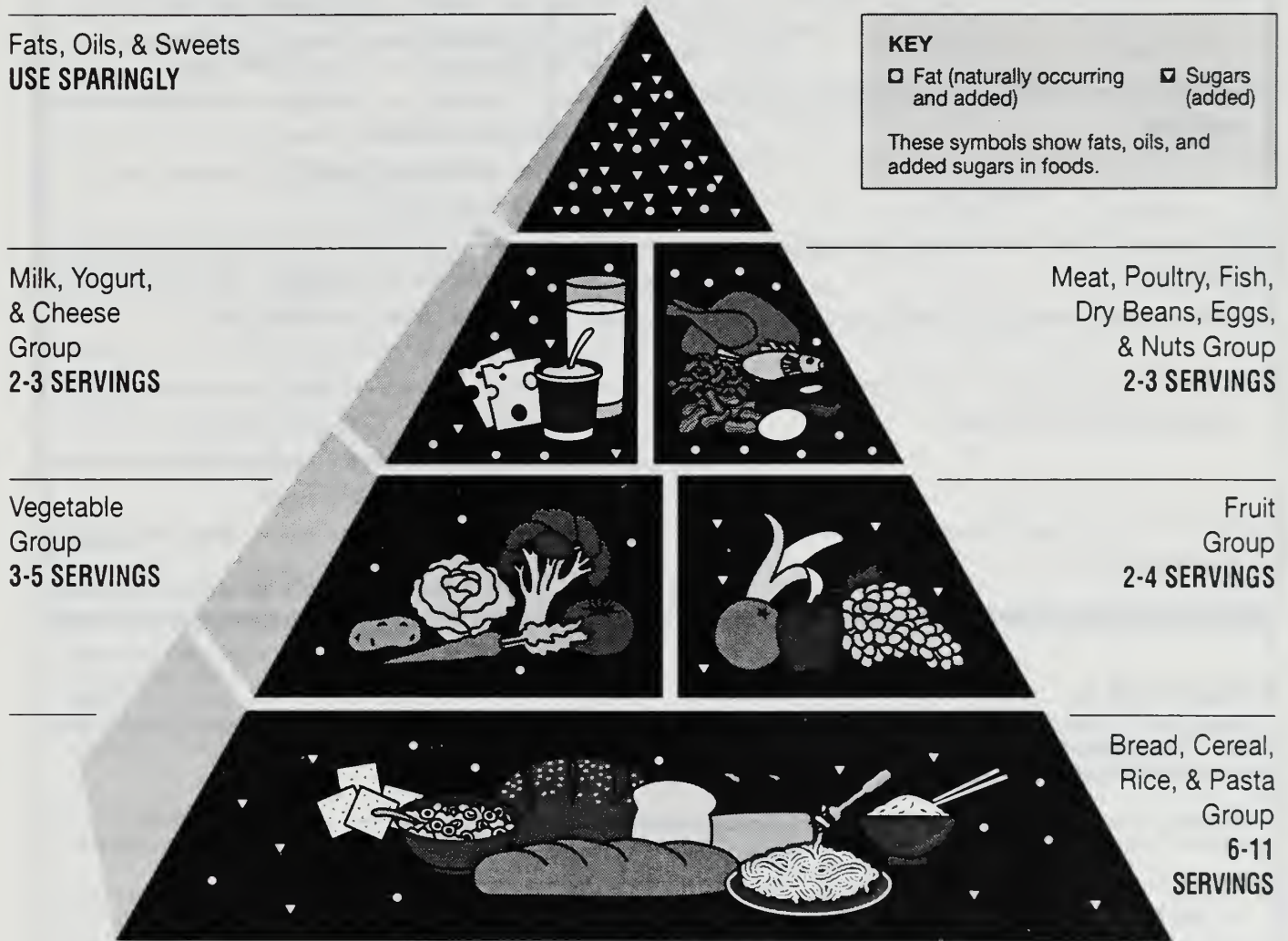


EXHIBIT 9-3

Food Pyramid

Food Guide Pyramid

A Guide to Daily Food Choices





CHAPTER 9

EXHIBIT 9-4

Food Group Servings

Food Groups	Amount of Food in One Serving
Milk, yogurt, and cheese	1 cup milk or yogurt 1 1/2 ounces of natural cheese 2 ounces of processed cheese
Meat, poultry, fish, dry beans, eggs, and nuts	2-3 ounces cooked lean meat, poultry, or fish 1/2 cup cooked dry beans, 1 egg, or 2 tablespoons peanut butter count as 1 ounce of lean meat
Vegetable	1 cup raw leafy vegetables 1/2 cup other vegetables, cooked or chopped raw 3/4 cup vegetable juice
Fruit	1 medium apple, banana, or orange 1/2 cup chopped, cooked, or canned fruit 3/4 cup of fruit juice
Bread, cereal, rice, and pasta	1 slice bread 1 ounce ready-to-eat cereal 1/2 cup cooked cereal, rice, or pasta
Oils, fats, sweets	Used sparingly

EXHIBIT 9-5

Fiber Content in Foods

Food	Average Amount Fiber (in grams)
Legumes (cooked, 1/2 cup)	5
Whole grain cereal (1 oz.)	4
Fruits (1 med.)	2.5
Whole grain bread (1 slice)	2
Vegetables (cooked, 1/2 cup)	2
Nuts and seeds (e.g., 5 peanuts)	1



EXHIBIT 9-6

Calcium Content of Various Foods

Food	Serving Size	Calcium content (mg)
Milk, yogurt	1 cup	300
Cheese	1 oz.	200
Cottage cheese	1 cup	240
Cream cheese	1 tbsp.	10
Ice cream	1 cup	220
Collards, kale, other vegetables	1/2 cup 1/2 cup	100 20 - 40
Fruits	1/2 cup or 1 medium	20 - 40
Legumes (cooked)	1 cup	140
Meat, poultry, fish	3 oz.	10 - 20
Eggs	1	30
Breads	1 slice	25
Cereals	1 oz.	15
Macaroni, spaghetti	1/2 cup	15

EXHIBIT 9-7

Sources of Dietary Iron

Food	Serving Size	Iron (mg)
Red meat	3 - 4 oz.	4.0 - 5.0
Chicken, ham	3 - 4 oz.	1.5 - 2.0
Legumes	1/2 cup cooked	2.0 - 4.0
Rice, cream of wheat	1 cup	0.7 - 1.4
Spaghetti, noodles	1/2 cup	0.3 - 1.4
Broccoli, carrots, collards	1 cup	0.7 - 1.4
Fruits	1 medium	0.3 - 0.7
Dried fruits	1 cup	3.0 - 6.1
Nuts	3/4 cup	2.0 - 4.0

EXHIBIT 9-8

Danger Signs of Disordered Eating Patterns

Common Behaviors Associated With Disordered Eating	Danger Signs
Avoidance of meals	Abruptly stops joining family at dinner; constantly has an excuse to leave the table; regularly avoids meals; gradual but constant weight loss; frequent loss of appetite
Exercises obsessively	Forces oneself to endure rigorous workouts on a regular basis; becomes extremely anxious at thought of missed exercise session
Preoccupation with food	Discusses food at the exclusion of any other subject of interest; cooks a lot for others but not for self
Hiding food or stealing money	Consumes food in such large quantities that she feels compelled to conceal behavior; resorts to thievery to buy food; may be bingeing and purging
Low self-esteem	Becomes overly critical of self: "I'm too fat" and "I never do anything right"
Striving for perfection	Places excessive demands on self to excel in all areas, from attaining the "perfect" body to excelling in recreational activities and school work
Hiding weight loss	Wears large, layered clothing; may conceal heavy objects in pockets if to be weighed
Drug use for weight control	Uses diuretics, laxatives, or ipecac syrup to induce vomiting; uses diet pills

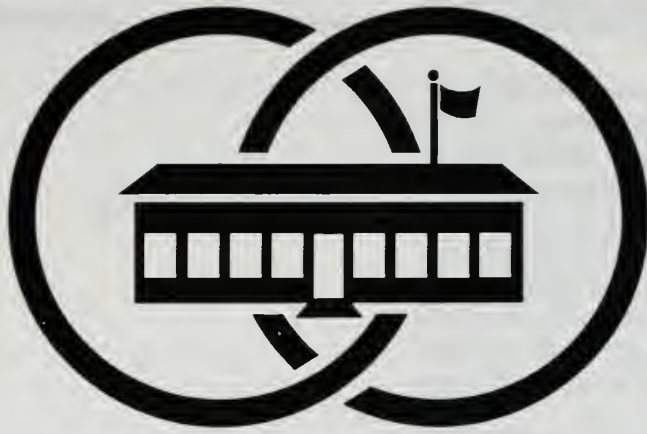


CHAPTER 9

EXHIBIT 9-9

Key Nutrients Needed by Pregnant Adolescents

Nutrient	Amount	Special Considerations
Vitamin A	800 mg/day	Adolescent females often have low dietary intake of vitamin A due to lack of intake of fruits and vegetables
Folacin (folic acid)	550 mcg/day for 11 to 14 year old; 580 mcg/day for 15 to 18 year old	Important for DNA and RNA synthesis. Essential during periods of increased cell replication and growth. Research has revealed that folic acid helps to decrease risk of delivering a baby with neural tube defects such as spina bifida
Vitamin B ₆	2.2 mg/day	Often lacking in adolescent diets
Riboflavin	1.6 mg/day	Helps cells use oxygen
Ascorbic acid (vitamin C)	70 mg/day; 100 mg/day for smokers	Enhances the absorption of dietary iron by two to four times when both are taken at the same time
Calcium	1600 mg/day if still in growing phase; 1200 mg/day if beyond growing phase	These amounts can be met by drinking 3–4 8-oz. cups of milk per day. Calcium is needed to meet fetal bone mineralization requirements and to prevent depletion of pregnant adolescent's calcium stores. Many African Americans, Asians, Native Americans, Hispanics, and Middle Easterners are unable to digest milk products, indicating the need for calcium supplements
Iron	15 mg/day	Iron needs increase as pregnancy progresses. It is needed for growth of fetal tissue and maternal circulating hemoglobin mass. Due to the difficulty in meeting iron needs, it is recommended that all pregnant adolescents take a supplement of 30–60 mg/day of elemental iron
Zinc	15 mg/day	Often lacking in adolescent diets, it is important for protein synthesis and growth
Protein	54–56 g/day	Most adolescent females meet the RDA for protein. However certain conditions may predispose a pregnant adolescent to be at risk for inadequate intake: low socioeconomic status; poor intake of total energy (if not enough calories are eaten, protein is catabolized for energy); strict vegetarianism (exclusion of all animal products) may limit the amount of protein intake
Energy (calories)	+300 kcal/day during 2d and 3d trimester	Primary dietary requirement: to ensure adequate intake of vitamins, minerals and protein; additional calories may be required if still growing or has depleted body reserves; best indicator of adequate caloric intake is adequate weight gain



Chapter 10

PHYSICAL FITNESS AND SPORTS

Massachusetts Law and Physical Education

Physical Activity of Massachusetts Students

Current Trends in Physical Education

Sports in School

Age-Appropriate Fitness Activities

Components of Fitness

Amount of Physical Activity Necessary for Fitness



Physical fitness is important throughout life to develop and maintain functional capability, to meet the demands of living, and to promote optimal health. Physical fitness is primarily determined by physical activity habits and is operationally defined by performance on tests which measure aerobic power, body composition, joint flexibility, and strength and endurance of the skeletal muscles. Regular physical activity increases life expectancy and can assist in the prevention and management of coronary heart disease, hypertension, diabetes, osteoporosis, obesity, and mental health problems. It is also a big factor in the prevention of athletic injuries.

Teachers, school nurses, and coaches can help students understand the importance of fitness and health as well as the long-term benefits of being physically fit. When physical education programs are coordinated with the school health service programs it ensures that the required sports physical examinations are completed, injuries are identified, and appropriate referrals for treatment are made. It also ensures that sports injuries are documented so that preventive strategies can be implemented.

The sedentary life-style of many children, along with poor nutritional habits, contribute to low levels of fitness. Too many calories and too little exercise are responsible for excessive body fat in up to 25% of American youth. Physical fitness is equally important for females and males. With eating disorders (which primarily affect girls) on the rise, it is vital that girls be encouraged to participate in physical fitness activities that contribute to a healthy life-style.

In response to the growing national trend of physical inactivity, in 1990 the U.S. Department of Health and Human Services began sponsoring "Healthy People 2000", national health promotion and disease prevention objectives designed to encourage children and adults to adopt appropriate lifelong exercise behavior in order to develop and maintain physical fitness. Its objectives include increasing regular physical activity among adolescents and adults, especially activities that develop and maintain cardiorespiratory fitness, muscular strength, endurance, and flexibility.

Physical activity and fitness, one of the 21 priority areas in "Healthy People 2000", has two objectives related to school age children:

1. Increase by at least 50% the proportion of children and adolescents who participate in daily school physical education.
2. Increase by at least 50% the proportion of school physical education class time.

Performed with the proper duration, frequency, and intensity, a program of fitness can:

- Promote sensory stimulation for the development of cognitive function.
- Improve the functioning of the central nervous, skeletal, muscular, cardiovascular, and metabolic systems of the body.



- Enhance self-concept, self-esteem, and social competence.
- Improve psychosocial functioning.
- Prevent the onset of some disease and delay the negative effects of aging.

MASSACHUSETTS LAW AND PHYSICAL EDUCATION

Massachusetts Physical Education Laws and Regulations, Chapter 603, and Title IX state that physical education is an integral part of the total curriculum and contributes to the development of the individual through the natural medium of physical activity — human movement. It is a planned sequence of learning experiences designed to fulfill the growth, development, and behavioral needs of each student.

Organized, daily physical education programs in the school setting are an important part of the overall education process and should give increased emphasis to the development and maintenance of lifelong exercise habits and provide information about how to attain and maintain appropriate physical fitness. Physical education should be an integral part of the school curriculum and coordinated within a comprehensive health education and human services program. The quantity and quality of school physical education programs have a significant positive effect on the health-related fitness of children. In Massachusetts, the number of clock hours of physical education that each student is required to complete annually is: 30 hours for kindergarten, 60 hours for grades 1 through 10, and for grades 11- 12, the school is simply required to offer something.

M.G.L. c. 71, s. 54A requires assignment of a physician or person trained in emergency medical care to interscholastic football games played by teams representing public secondary schools.

Although M.G.L. c. 71, s. 57 requires a pre-sports physical examination by a physician, the school may request a waiver to have a nurse practitioner perform such an examination. The MDPH school health advisor can provide more information.

PHYSICAL ACTIVITY OF MASSACHUSETTS STUDENTS

The 1993 Massachusetts Youth Risk Behavior Survey (MDOE, 1994) surveyed students about the degree to which they had engaged in certain types of activities in the past seven days. Almost two-thirds (65%) of students reported having engaged in activities that made them sweat and/or breathe hard on at least three of the last seven days. Approximately 47% reported engaging in physical activity for strengthening or toning muscles, and 49% reported engaging in stretching exercises on at least three days in the past week. About 45% said they had walked or bicycled for at least 30 minutes on the day prior to the survey. Overall, these measures of exercise decrease with increasing grade level; a higher percentage of ninth graders compared to twelfth graders engaged in physical activity in the previous week.



About 82% reported participating in a physical education class at least one day in an average school week. This level decreased substantially by grade level, from 95% of ninth graders to only 69% of twelfth graders. Fifty-eight percent of all students reported spending over 20 minutes actually exercising during their average physical education class. Over half (51%) played on a sports team organized by their school in the last 12 months, while 40% played on a nonschool sports team in the last year. A greater percentage of young men than young women played on either type of sports team, and young women spent less time playing sports during their physical education class than did young men.

CURRENT TRENDS IN PHYSICAL EDUCATION

Diversified physical education programs include a range of activities and concepts in the areas of conditioning and physical fitness: individual and dual sports, team sports, gymnastics, rhythm and dance, track and field, aquatics, and outdoor activities. These programs must be planned and implemented in ways that maximize the goals of physical education *and* ensure the health and well-being of all students.

Physical educators are increasingly focusing on relevance rather than tradition and participation rather than competition. The current national trend is to teach activities that prepare children for a lifetime of health with emphasis on teaching noncompetitive team sports skills. For example:

- A basketball skills class may be taught with every student having a basketball, thus eliminating waiting in line. Students may learn backyard basketball games involving 2 to 4 people such as knock-out, hot shot, or 2 on 2, rather than waiting for the opportunity to play in a full court game. Playing with two basketballs simultaneously adds an aerobic component.
- Participation in volleyball class may be enhanced by modifying the rules using unlimited hits, two serves, or a softer ball. Students can aerobicize volleyball by playing 2 on 2, 3 on 3, or 4 on 4.
- Traditional large group games popular with younger students, such as "Capture the Flag", may be altered to remove the elimination factor and increase the aerobic factor. Instead of sending the students to "jail" or out of a game, students may be required to jog a distance and immediately return to play.

Regardless of the activities offered in a physical education curriculum, health related fitness is the underlying theme. Students should have an understanding of the fitness concepts and be able to apply them to their own life-style. The National Association for Sport and Physical Education (NASPE), leaders of the national physical education reform movement, has identified a set of formal standards for teachers and coaches on the learning activities and skills that are appropriate at different ages, beginning at the kindergarten level.



Some states are using the guidelines to revamp their programs. NASPE has defined the general characteristics of a physically educated person as follows:

- Has learned skills necessary to perform a variety of physical activities.

Moves using concepts of body awareness, space awareness, efforts, and relationships.

Demonstrates competence in a variety of locomotor and nonlocomotor skills performed individually and with others.

Demonstrates proficiency in a few forms of physical activity and has learned how to learn new skills.

- Being physically fit.

Achieves and maintains physical fitness and designs safe, personal fitness programs according to principles of training and conditioning.

- Knowing the implications of and the benefits from involvement in physical activities.

Identifies the benefits and costs as well as risks and safety factors of regular physical activity.

Recognizes that participation in physical activity can lead to multicultural and international understanding.

Understands that physical activity provides the opportunity for enjoyment, self-expression, and communication.

- Valuing physical activity and its contributions to a healthful lifestyle.

Appreciates the relationships with others that result from participation in physical activity.

Respects the role that regular physical activity plays in the pursuit of lifelong health and well-being.

SPORTS IN SCHOOL

Sports can involve everyone: students, coaches, officials, and parents. It is important that all do their very best according to the rules and within the code of sportsmanship. Sportsmanship involves competing against others of comparable talent, to the best of one's ability, fairly, honestly, respectfully, and with dignity. The basis of fair play is equitable opportunity with emphasis on sportsmanship and participation. "Fair-play" teachers and coaches aim to:

- Help athletes develop a positive self image.
- Promote respect for the rules, officials and their decisions, and opponents.



- Encourage a constructive attitude toward competition.
- Maintain a sense of dignity under all circumstances.
- Provide an equal opportunity for all to participate.
- Encourage athletes to continue their participation in sports.
- Develop the ability to accept constructive criticism.

Winning is not defined by the score of the contest. Winning is participation. It is important for teachers and coaches to reinforce or reward effort as much as results. In other words, they should encourage effort, not demand results.

The U.S. Consumer Product Safety Commission reports that 4 million youths seek treatment in hospital emergency rooms each year as a result of sports injuries, with another 8 million treated by family physicians for such injuries. The best protection against preventable injuries is to be well informed. The questions below address several key safety issues:

- Are coaches and teachers certified in sports first aid and cardiopulmonary resuscitation?
- Are the coaches and teachers certified by the national governing body of their sport or by the National Youth Sports Coaches Association, American Coaching Effectiveness Program, or PACE?
- Does the coach or teacher collaborate with the school nurse to ensure that students' health needs are addressed in a coordinated fashion?
- Does the coach or teacher have a written emergency plan in case of an accident, and has it been rehearsed?
- Are there adequate liquids to keep students hydrated?
- Is there a first-aid box and ice at the site of all activities?
- Does the school have a sports injury prevention course for students as part of their health education program? (See Chapter 13 for more injury prevention.)
- Are there preactivity warm-ups, stretching, and cool-down exercises?
- Do the students know all the rules?
- Are preparticipation physical exams required for sports activities? (See Chapter 5 for more on requirements.)
- Does the coach or teacher explain the conditioning program before sign-ups, so the children know what is expected of them physically?



AGE-APPROPRIATE FITNESS ACTIVITIES

Physical activity and education is considered an integral and essential component of the education of American youth. It offers a unique contribution to the development of knowledge and positive attitudes concerning human movement as well as physical fitness.

For the elementary school child, success in work or play is influenced by the ability to move effectively and efficiently. In this age group, movement is one of the most important means of nonverbal communication, expression, and learning. A child needs many opportunities to participate in well-conceived and well-taught learning experiences to become a fully functioning individual. Some leaders in the field consider regular physical activity and education especially important for elementary students since younger students are learning motor skills and developing attitudes toward physical activity that are harder to acquire later on.

For the middle school student, regular physical activity and successful participation in physical education class can enhance self-esteem. Students at this level need instruction in the relationship between health and fitness concepts and physical activity. Variety in programming, interdisciplinary connections, a noncompetitive environment, relevance to healthy life-style choices, and enjoyment are characteristics of a successful middle school experience.

At the high school level, students must also be prepared to solve their own fitness problems. Learning opportunities should include situations that encourage students to create their own exercise programs. Senior high students can design and evaluate their own workouts, as well as create and evaluate dietary plans. In order to become responsible for their own fitness, students must learn how to set realistic goals and evaluate them, how to apply fitness knowledge, and how to assess their own fitness status.

COMPONENTS OF FITNESS

In an effort to accomplish stated national objectives related to "Healthy People 2000", various organizations have developed tests to estimate current status on the various defined components of physical fitness. The most common tests in the United States include: The Prudential Fitnessgram, Physical Best, The President's Challenge, The Amateur Athletic Union Test, and Fit Youth Today. This section discusses the five fitness components which these tests measure: cardiovascular performance, flexibility, muscle strength and muscle endurance, and body composition.

The conditioning tips and exercises discussed come from several sources: The *Prudential FITNESSGRAM* developed by The Cooper Institute for Aerobics Research; *Sportwise: An Essential Guide for Young Athletes, Parents, and Coaches* by Lyle L. Micheli, president of the American College of Sports Medicine; the National Athletic Training and Fitness Institute; and the South Shore YMCA. (Exhibit 10-1 contains sample exercises.) Before starting a fitness program, individuals should have a full physical examination and follow these recommendations:



- A fitness program should be based on present level of strength, not the strength one has had in the past or would like to have.
- Exercises in a program should be performed in the order given - from large-muscle groups to smaller ones, lessening the risk of injury.
- Any medical problem should be referred to a physician.
- Train only three days per week with alternate days of rest. Muscles need the break to recover and ready themselves for further challenge.
- It is important to maintain accurate records of exercise. A workout log of the amount of weight lifted, number of miles run or walked, etc. will enable an individual to assess progress and change the program accordingly.

Cardiovascular Performance

The fitness level of the cardiovascular system is probably one of the most important measures of general fitness because it is an indication of how effective the heart and lungs are in response to the stress of activity. There is a direct correlation between cardiovascular fitness and risk of heart disease. **Aerobic exercise** is activity employing large-muscle groups over an extended period of time such as distance cycling, swimming, and jogging. The heart rate and breathing rate increase during the activity. Aerobic exercise has several benefits that affect cardiovascular fitness:

- Increases energy level.
- Improves the condition of the heart and cardiovascular system.
- Improves blood lipid levels.
- Decreases body fat.
- Aids in controlling high blood pressure.
- Helps to control stress.
- Enhances endurance.

General Tips for Cardiovascular Conditioning

- Wear proper footwear.
- Watch out for blisters, strains, bruises, pain, illness, and similar injuries.
- Wear light clothing. Don't use a rubber sweatsuit.
- Maintain fluid balance (drink water before, during, and after exercise).
- Try to avoid training outdoors during the heat of the day.
- Set aside a special time each day for training.



- Train with a buddy, especially during weight training sessions.
- Begin and end all sessions with proper warm-up and cool-down.
- Build up gradually. Don't try to do too much too soon.
- Don't cheat on the exercises.
- Keep a log of workouts.
- Try to do a variety of exercises.
- Maintain daily nutritional and rest requirements.

Aerobic exercise, the performance of exercise with the utilization of oxygen, is the base on which all other training depends. It develops cardiovascular efficiency and thus improves endurance capacity. It increases oxygen uptake, delays the onset of fatigue, and enables one to maintain a high rate of exertion throughout a game or workout.

The ideal aerobic exercise program continues year round and has three phases:

1. *Warm-up.* A way of gradually heating up the working muscles, which reduces the risk of injury and prepares the body for exercise
2. *Exercise.* The actual program, which attends to the fitness level of the individual in terms of the frequency, duration and intensity of the workout.
3. *Cool-down.* A gradual decrease in the intensity of the aerobic effort, followed by some gentle stretching exercises.

During the workout, heart rate should be maintained somewhere between 150 and 170 beats per minute. To determine heart rate, take a pulse; count the number of beats for 10 seconds, then multiply by 6 to obtain the rate per minute.

Flexibility

Flexibility involves maintaining the range of motion of the joints that can be lost by tightening of muscles or ligaments, or both. Flexibility is an important component of physical fitness. To bend, twist, or reach and feel pain or discomfort may be the result of a loss of flexibility. A life of inactivity often results in a shortening of tendons and muscles, which can result in chronic muscle discomfort or even injury.

Poor flexibility is related to a variety of problems such as poor posture, general tension, muscle and joint injuries, and lower back pain. The importance of flexibility is well-established not only for safer exercise but for a higher quality of life. It is advisable to devote at least 10 to 15 minutes each day to stretching using the following guidelines:

- Always stretch before an aerobic or strength training program.
- Avoid overstretching. The warning signs are burning, cramping, or trembling in the muscles.
- Use a smooth stretching motion and avoid any bouncing, which might promote injury.

Strength and Endurance

Muscle strength is usually defined in terms of absolute strength (the maximal amount of force one can exert) and muscle endurance (the ability to contract a muscle continuously over an extended period of time).

Strength-based exercise should begin by age 12. It is extremely important for children, regardless of whether they are involved in competitive or organized sports. This type of exercise:

- Improves strength of muscles, bones, tendons, and ligaments.
- Improves dexterity and balance.
- Combats the effects of type II diabetes.
- Improves muscle tone and joint stability.
- Decreases the probability of injury.
- Improves athletic capabilities.
- Enhances physical endurance.

General Tips for Strength Conditioning

- Good form when lifting is critical. Avoid rocking back or twisting while exercising with the weights.
- Concentrate on breathing during the lift. Do not hold your breath. Exhale during your lift, and inhale on the return.
- Starting weights should be light to help you concentrate on technique and avoid muscle soreness.
- Exercise should be performed slowly to work the full range of muscle.
- Once you have the proper technique, you should be able to perform 8 to 12 repetitions of each exercise. If 8 is too many, do not compensate with bad form. Simply lower the weight until you can do 8 to 12 repetitions. If 12 repetitions are easily obtained, increase the weight by one plate.

Body Composition

Body weight is divided into two categories: fat and lean. Lean body weight is composed of the internal organs, bones, and muscle. The remainder is fat weight. A low body fat percentage has the following benefits:



- Increase in cardiovascular fitness level.
- Decrease in risk of developing adult-onset diabetes.
- Heightened sense of self-confidence and well-being.
- Decreased risk of cancer of the breast, ovaries, prostate and intestine.
- Decreased risk of hypertension and coronary disease.
- Aids in avoiding or managing back pain.
- Decreased incidence of orthopedic injuries.

AMOUNT OF PHYSICAL ACTIVITY NECESSARY FOR FITNESS

The amount of exercise required for optimal functional capacity and health at various ages has not been precisely defined. The influence of the family is important, and parents should be encouraged to show concern for physical fitness as an important factor that affects their child's health and well-being. The American College of Sports Medicine (ACSM) recommends that physical fitness scores be interpreted in relation to minimum specific standards rather than by comparing them with average scores.

Body fat composition is also a good indicator of fitness. Currently, there is a movement in schools toward conducting performance body composition assessments for students. It is recommended that males should strive to fall within an optimal range of 10 to 20% body fat, while females should fall within a 15 to 27% range. These ranges account for age differences, allow for individual differences and preferences for activity, and are associated with little or no health risk from diseases related to body fat. Adolescents who fall above or below these optimal ranges may develop health problems. Students should not be encouraged to decrease body fat below the optimal range.

Among the most often asked questions concerning physical fitness are:

How often should one exercise? This depends on goals and level of fitness. With lower fitness levels, three times per week is appropriate. As one gets more fit, frequency may increase to five or six times per week.

How long should one exercise? Duration depends on level of fitness and personal goals. The minimum duration for the effort should be 20 minutes, with a gradual increase of time relative to improved fitness.

How hard should one exercise? After determining one's resting heart rate, calculate the "training" heart rate as $220 \text{ beats/minute} - \text{age} = \text{maximum heart rate}$. These two rates give a range. The heart rate range should be based on current fitness level and can be changed as fitness level improves. Those with



a low fitness level should exercise at 60 to 65% of maximum heart rate, medium fitness 70 to 75% of maximum heart rate, and high fitness at 80 to 85% of maximum heart rate. As fitness improves, the resting rate should decrease.

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Westcott, W., Tolken, J., Wessner, B. *Better Body Composition: A Cooperative Approach for Helping Overweight Youth*. South Shore YMCA, 79 Coddington St., Quincy, MA 02169.

RESOURCES

American Alliance for Health, Physical Education, Recreation, and Dance (AAHPERD)
1900 Association Drive
Reston, VA 22091
(703) 476-3400

AAHPERD Publications sales
(800) 321-0789

Massachusetts Alliance for Health, Physical Education, Recreation, and Dance
Contact the AAHPERD for current officer names and phone numbers.

Massachusetts Department of Public Health
Health Promotion and Chronic Disease Prevention
150 Tremont Street
Boston, MA 02111
(617) 727-0945



Massachusetts Governor's Committee on
Physical Fitness and Sports
Call the Massachusetts Department of Public Health for location
(617) 727-0945

Massachusetts Interscholastic Athletic Association
83 Cedar
Milford, MA 01757
(508) 478-5641

National Association for Leisure and Recreation
1900 Association Drive
Reston, VA 22091
(703) 476-3472

National Association for Sport and Physical Education
1900 Association Drive
Reston, VA 22091
(703) 476-3410

National Athletic Training and Fitness Institute
1395 North Main Street
Randolph, MA 02368
(617) 963-8116

National Dance Association
1900 Association Drive
Reston, VA 22091
(703) 476-3436

National Youth Sports Foundation
10 Meredith Circle
Needham, MA 02192
(617) 449-2499

The Prudential FITNESSGRAM
Cooper Institute for Aerobics Research
12330 Preston Road
Dallas, TX 75230
(214) 701-8001

South Shore YMCA
79 Coddington Street
Quincy, MA 02169
(617) 479-8500



EXHIBIT 10-1

Sample Exercises

Flexibility Exercises

Lying Full-Body Stretch (relaxation)

1. Lie on your back with arms and legs outstretched.
2. Close your eyes, relax your entire body and inhale deeply.
3. Hold for a count of one; then slowly exhale completely. Repeat 15 times.

Seated Neck Circle (neck)

1. Sit on floor with legs crossed. Turn your head to the right, and try to look over your right shoulder.
2. Slowly rotate your head to the left, and look over your left shoulder. With your head facing forward, bend your neck to the right so your right ear is toward your right shoulder. Hold for 30 seconds. (Do not twist or jerk the neck.) Repeat to the left.
3. Return head to center position, and bend neck forward so chin moves toward chest. Extend neck so you're looking at ceiling. Hold for 30 seconds.

Standing Ballet Stretch (quadriceps)

1. Stand on your left leg. With your left arm, balance yourself using a chair or wall.
2. Bend your right leg back, and pull your right ankle up toward your right buttock. With right hand, pull up on your ankle so that the knee points down until you feel the action point. Hold for 60 seconds. Then change sides.

Seated Pike Hamstring Stretch (hamstrings)

1. Sit on floor with legs outstretched, ankles together, and toes pointed upward.
2. Place your hands on the floor by the thighs. Look straight ahead, and gently slide your hands forward.
3. Keep your back and knees straight, and try to bring your chest as close to your knees and thighs as possible. When you feel a stretch behind your knees and thighs, stop and hold for 60 seconds.

Toe Circles (ankles)

1. Sit with knees fully straightened, toes pointing up, and ankles 12 inches apart.
2. Relax thigh and leg muscles. Begin by pointing your toes away from you.
3. Rotate your feet away from each other in a circular motion. Make the largest circles you can.



4. Perform 15 circles in this direction and 15 more in the other direction. Repeat exercise with feet pointed back toward your knees.

Strength Training Exercises Using Body Weights or Light Dumbbells

Dumbbell Squat (quadriceps, hamstrings, gluteal)

1. Begin with feet flat on the floor about shoulder width apart.
2. Hold dumbbells at sides with arms fully extended.
3. With head up, back erect, and feet flat, slowly lower hips until thighs are parallel to the floor.
4. With head up, back erect, and feet flat, return to standing position.

Trunk Curl (abdominal)

1. Begin in lying position with knees bent and feet flat on the floor.
2. Place hands lightly behind head with elbows far apart.
3. Slowly curl head, shoulders and upper back off the floor until lower back is pressed firmly against the floor.
4. Slowly return to lying position.

Dumbbell Bench Press (pectorals, triceps)

1. Lie face up on a flat bench with feet flat on the floor.
2. Hold dumbbells above chest with arms fully extended.
3. Slowly lower dumbbells to chest, keeping elbows away from sides.
4. Slowly press dumbbells up to starting position, keeping elbows away from sides.

Dumbbell Bent Rowing (latissimus, biceps)

1. Place one hand on bench so that the back is supported in a horizontal position.
2. Hold dumbbell in other hand with arm fully extended.
3. With head up and back straight, slowly pull dumbbell to chest.
4. With head up and back straight, slowly lower dumbbell to starting position.

Dumbbell Lateral Raise (deltoids)

1. Stand erect with arms at sides and elbows at a right angle.



2. Keeping elbows at a right angle, slowly raise arms to horizontal position.
3. Keeping elbows at a right angle, slowly lower arms to starting position.

Dumbbell Curl (biceps)

1. Hold dumbbells at sides with arms fully extended.
2. With head up and back erect, slowly curl dumbbells to shoulders.
3. With head up and back erect, slowly lower dumbbells to starting position.

Bench Dip (triceps, pectorals)

1. Sit on edge of bench with legs straight and heels on the floor.
2. Place hands on edge of bench and move hips forward.
3. Beginning with arms fully extended, slowly lower hips until upper arms are parallel to the floor.
4. Slowly press up to the starting position.

Strength Endurance Exercises

In the strength endurance circuit, exercise at each station until exhausted, resting 2 to 3 minutes between stations. Do the circuit only one time, preferably with a partner. Use relatively light weights throughout the circuit to build up greater stamina. The circuit has ten stations:

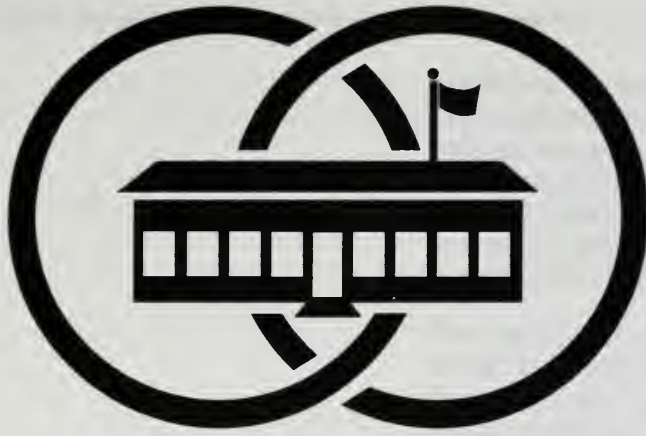
1. Skipping rope
2. Half squats
3. Inclined push-ups
4. Full extension rowing with weight bar
5. Step-ups on bench with weight bar behind neck. Alternate legs. Do one leg at a time until exhaustion
6. Pull overs, wide grip, with weight bar. Done from lying position on bench (on back). Touch weight to floor and pull over to touch knees
7. Half squat and jump with weighted vest.
8. Wrist curls weight bar; forearms rest on knees.
9. Sit-ups: Cut body in half on a bench. Hold 5- to 10-pound plate behind head. Touch back of head to floor and elbows to knees.
10. Back extensions: Cut body in half over bench (facing down). Touch forehead to floor and arch back as high as possible.



CHAPTER 10

In the speed circuit, move from one station to another as fast as possible, resting 2 to 3 minutes between circuits. Work toward five complete circuits of these six stations:

1. 10 pushups
2. 20-yard straddle run
3. Vertical jumps
4. Standing press repetitions
5. 50-yard sprint
6. Two forward rolls



Chapter 11

MENTAL HEALTH

Developmental Stages

Prevention Activities

Common Psychological Problems



Chapter 11

The school has a role to play in promoting healthy emotional development for all children. Spending every day in the company of youngsters who are profoundly affected by the world in which they live, educators develop a deep awareness of the importance of the positive influence of the school. They know that healthy emotional and social development, including a sense of self-worth, is critical to the success of children within and outside the classroom.

The school also can play a role in identifying children with emotional, behavioral, and mental health problems and in ensuring that they get proper assessments and appropriate interventions. Mental health problems have a variety of causes and can be exacerbated by learning disabilities or physical health problems; some may have a physiological base; others may be a result of trauma or of familial or social stresses and problems.

Whatever the cause, there is a compelling reason for the school to be alert to the issues: approximately 3 million children in the United States suffer from a serious emotional disturbance and an estimated two-thirds of them do not get the care appropriate to their needs, according to the Children's Defense Fund *1994 Yearbook*. It is important that a joint effort be forged among schools, parents, and community mental health providers. School professionals such as guidance counselors, school psychologists, nurses, and adjustment counselors are in a position to bridge the gap among groups.

A Massachusetts Department of Education (MDOE) report on systemic school change explicates the significant role educators can play in children's emotional development: *"Possibly the most critical element to success within school is the student developing a close and nurturing relationship with at least one caring adult. Students need to feel that there is someone within school whom they know, to whom they can turn, and who will act as an advocate for them."*

DEVELOPMENTAL STAGES

An understanding of the stages of children's and adolescents' emotional and psychological development is helpful in distinguishing between behavior that is typical of a developmental phase and what may necessitate observation and treatment by professionals. Typically, the middle years of childhood are a kind of golden age, an exciting time of emotional awakening, growth, and engagement that forms the foundation for a fulfilling adult life; adolescence may bring an increase in emotional turbulence. The following are some very broad guidelines regarding school-aged children and adolescents, however they may differ based on the child's gender, cultural background, and other individual characteristics. These guidelines come from *Your Child's Emotional Health*:

Ages 6 to 7 Years

- Tend to exhibit extremes of emotional responses (e.g., joyous delight instead of quiet joy, or hysterical crying instead of simple sadness).
- Very susceptible to having hurt feelings.



- May exhibit school phobia — a fear of going to school that can lead to feigned or psychosomatic illness.
- Quarrel with parents, especially mother, as a means of discharging separation anxiety associated with starting school life or of testing the parent-child relationship in this new school-oriented stage of life.
- Form multiple, relatively superficial, and relatively short-lasting relationships with peers.
- Engage in sex play to satisfy curiosity about genitals.
- Frequently initiate sibling rivalry.
- Occasionally resort to lying or stealing as a coping mechanism or a means of rebellion.

Ages 7 to 9 Years

- Exhibit much more emotional equilibrium than previously, although at age 8 may go through a recurrence of extreme emotional reactions and quarrels with parents.
- Experience both fear and rational concern related to possible dangers lurking in the outside world: crime, violence, catastrophe.
- Become interested in sex talk and sex jokes and are curious about the mechanics of reproduction.
- Develop crushes on peers.
- Handle competitive play — winning and losing — relatively well.
- Worry about failure in academic performance.
- Assume more responsibility for own acts instead of blaming others.
- Fear being wrong or being humiliated.

Ages 9 to 11 Years

- Generally happy and content.
- Rely more and more on peers as opposed to parents for evaluation, approval, and direction.
- Form “puppy love” relationships with peers.
- Develop more mature relationships with siblings.
- Exhibit concern over issues of justness and fairness.
- Seek and develop a “best friend” relationship.
- Worry about the possibility of parents’ fighting, divorcing, losing their jobs, becoming ill, or dying.



Ages 11 to 13 Years

- Become very self-conscious and sensitive about physical development, physical health, and sexuality.
- Fear losing possessions, popularity, or status.
- Develop romantic attachments with peers.
- Occasionally lose patience with siblings and parents if they appear to interfere with personal, peer-related interactions and ambitions.
- Seek and develop a close circle of friends for social support.
- Exhibit moodiness and irritability.

Ages 13 to 19 Years

- Crave personal freedom from parents but still want and need their love.
- Intensely concerned about understanding why things are the way they are.
- Experiment and test the limits of pleasure and pain; may be involved in a reckless act of thrill seeking.
- May spend much of time at home silent and withdrawn, treat adults in general with distrust and disrespect, defy household rules and family standards, refuse to go anywhere with the family, skip school, run away, experiment with drugs, engage in sex.

PREVENTION ACTIVITIES

The major causes of mortality and morbidity among children and adolescents (accidents, homicide, suicide, substance abuse, and sexually transmitted disease) are preventable. Other risk factors may be related to poverty or lack of adequate food, shelter, and clothing. There are many useful intervention techniques that can be used for each type of prevention. Some techniques can be applied at any level; for example, all students can be taught social skills. Small groups focusing on social skills training can be useful as secondary prevention for children at risk, and social skills taught to a group of students having difficulty with peers can provide tertiary prevention for those children. Obviously, different problems may call for different interventions.

Primary Prevention

Primary prevention consists of providing children in advance with resources and skills necessary to cope with complex life situations. Such skills can help students gain a sense of competence and self-worth, which is critical to emotional well-being. Teachers, in concert with other school staff, such as the principal, guidance counselor, and health staff, have an important role to play in building a positive classroom atmosphere for students. Topics and activities might include: problem-solving class meetings, improving communication skills, teaching cooperation, helping students handle anger, frustration, and aggression, teaching tolerance, helping



students resolve conflicts with other students and with adults, and providing opportunities for positive emotional expression.

In addition to organizing and facilitating student-focused prevention activities, mental health professionals may play an important role as organizational consultants to schools by helping the school maintain a nurturing environment, providing consultation to teachers and staff about management of different problem behaviors, and helping schools develop policies and procedures to deal with mental health and related issues.

Secondary Prevention

Secondary prevention efforts focus on identifying and providing services for children who are at risk of developing emotional, behavioral, or school-related problems. Children at risk may include those with family or learning problems, or those experiencing the loss of a significant person. Because teachers are in daily contact with students, they may be in a position to identify children at risk. A typical example of secondary prevention is group counseling with a trained mental health specialist which focuses on helping children learn to cope with problems in their lives.

Tertiary Prevention

The third level of prevention consists of providing services to children who are actively demonstrating emotional, behavioral, or school-related problems. In these cases, trained school staff may provide concentrated support and follow-up for students who are apathetic, acting out, or showing poor self-esteem, as well as for students returning to school after residential treatment. Students may be seen for counseling in small groups or in individual sessions. Schools may provide tertiary services in-house or develop linkages with community mental health programs to provide them with the necessary expertise or services.

COMMON PSYCHOLOGICAL PROBLEMS

It is extremely important for helping professionals to understand the dynamics of a particular child's situation in order to help that child effectively. Physiological problems, such as chemical imbalances in the brain or neurologic disorders, may be underlying factors in any given case, and effective intervention depends on appropriate diagnosis and treatment planning. The parents or guardians of children who are withdrawn or overly aggressive, those having significant problems interacting with peers or adults, and those encountering serious academic problems should be contacted and the students referred for assessment.

This section reviews the prevalence and symptoms associated with some common psychological problems of school-aged children and adolescents and suggests some school-based interventions which may be applied.

Depression

Depression exists along a continuum, ranging from transient feelings to mood disorders. Everyone has feelings of sadness, discouragement, and moodiness that are normal responses to failure or distress. Depression is an illness which evolves from a normal emotional reaction to a disorder typified by feelings and behaviors that last longer than a few days and are so intense that they require treatment.

There is considerable disagreement among health professionals about the prevalence of childhood depression. Depending on the nature of the research and the population studied, statistics range from 5% to 20% of children and adolescents who suffer from depression. According to Sroufe and colleagues, depression has been found in 15% to 20% of children referred to clinics. A 1990 nationwide screening of 1400 public school children grades 4 through 7, as reported by Stark and his colleagues, found that just over 4% were depressed at the time of the screening.

Although there is disagreement about the actual rate of illness, there is widespread agreement that children can and do suffer from clinical depression. Low self-esteem, the tendency to self-blame, feelings of powerlessness and hopelessness, and loss of pleasure in living are all common indicators of depression. However, it is sometimes difficult to identify depression in children by these indicators because children may not express their feelings. Children may exhibit symptoms of depression through absenteeism, conduct disorders, or psychosomatic illness. Thus, it has been found that children referred for educational, behavior, or medical assessment typically have a higher prevalence of depression than the general population of children.

While mental health professionals continue to debate the exact causes of depression, onset appears to be associated with a complex mix of multiple factors including stress and emotional loss. One widely held theory suggests that there is a genetic component which may make people (including children) biologically vulnerable to depression. In reaction to stressful situations, biologically vulnerable people are thought to experience changes in their body chemistry that may result in their becoming depressed. Divorce, death, illness, family discord, abuse, confusion about sexual identity, and neglect are examples of stressful traumas that may make children more vulnerable and more at risk of becoming depressed.

Some children prove to be significantly resilient to these traumas, and it is important to recognize that no one can define a stressful event for anyone else. Two children who are vulnerable to depression may react very differently to the same experience. For example, if both experience the death of a significant person, one's reaction may be short-lived grief, while the other may develop full-blown depression.

Symptoms

It is believed that a child's internal experience of depression is similar to that of an adult. The most common symptom is a persistent change in mood, often characterized by sadness, helplessness, and hopelessness. However, some depressed people have a persistent mood state characterized by anxiety and agitation. Most educators are aware of the more common "depressed mood" of clinical depression, but it is important to be aware that some depressed children may be identified by their acting out, restlessness, and general agitation. Depression may also be cyclical in nature, characterized by *both* a depressed mood and agitation.

According to Philip Kendall, a child or adolescent diagnosed with major depression typically exhibits at least five of the following



symptoms, including either the first or second symptom for at least 2 weeks:

- Depressed or irritable mood for most of the day.
- Diminished interest or pleasure in almost all activities most of the day.
- Significant increase or decrease in weight or appetite or failure to gain expected weight.
- Inability to sleep or excessive sleepiness.
- Slowed body movements or hyperactivity.
- Fatigue or loss of energy.
- Feelings of worthlessness or excessive or unnecessary guilt.
- Inability to concentrate or indecisiveness.
- Recurrent thoughts of death, thoughts of suicide without a plan, or a suicide plan.

Another type of depression is Seasonal Affective Disorder (SAD). Seasonal changes may explain some children's mood shifts. Children and teens who experience SAD typically become tired, unhappy, and lethargic during the winter months.

Bipolar disorder is another type of depression. Also known as manic depressive disorder, it involves periods of extremely high moods that alternate with low moods or depression. These swings are so severe that they may interfere with school and relationships.

What Schools Can Do

Children and adolescents who are at risk for depression can be helped by consistent nurturing from trusted adults. People who survive traumatic childhood experiences often mention the crucial role in their survival played by a single caring adult. Very often, that caring adult was an educator. The following are suggestions for school personnel to help children who are at risk:

- In consultation with the child's parents or guardians, refer any child who exhibits symptoms to the school mental health professional. Children should be assessed by a pediatrician or other primary health care provider as well as a mental health provider in the community with expertise in this area.
- Implement a primary prevention program in the school that stresses the normalcy of a range of feelings following certain kinds of events and the availability of school adults to help with those feelings.
- Provide in-service training to help all staff understand and respond appropriately to mental health issues.



- Promote awareness about stress related to traumatic events, as well as about the impact of chronic negative experiences on children and the importance of responding with concern and support.
- Be sure there is a procedure established for school personnel to follow to obtain immediate professional help for students exhibiting symptoms, especially if the student mentions suicidal thoughts.

Suicidal Tendencies

Suicide attempts can correctly be considered a symptom of depression. However, a successful suicide is such a devastating event for everyone, including the school, that it is worthwhile for educators to learn more about it specifically. Suicide ranks as the third leading killer of 15–to 24–year-olds. There is also some evidence that a successful suicide of one student may lead to suicide attempts by other students in the same school as a result of a “contagion” effect.

A study by Sroufe and his colleagues found that 6% of male and 9% of female seventh graders surveyed reported having attempted suicide, and that 8% of male and 18% of female twelfth graders reported such an attempt. In both 1990 and 1993 MDOE Youth Risk Behavior Surveys, 24% of Massachusetts school children surveyed reported having seriously considered suicide. Twenty percent indicated they had actually made a plan for suicide, and 10% had attempted suicide. Over 3% were actually treated for a suicide attempt.

There is no one identifiable cause of suicidal tendencies, but certain factors may put some youth more at risk. Triggers may include fights with parents, school difficulty, trouble with the law, death or divorce, physical or sexual abuse, or breaking up with a girlfriend or boyfriend. There has been an increase in suicides by youth worried about their sexual orientation and society’s response to it. Many children and adolescents experience stressors, but some are more vulnerable to feeling extremely troubled, hopeless, or anxious; they may feel that life is unbearable, that it will never get better, and that they are powerless to do anything to change the situation.

Children in this decade have a much broader knowledge of the world than in earlier times. Some mental health professionals speculate that a significantly stressed family and social environment, coupled with a graphic and detailed knowledge of the state of the world, may predictably lead to a sense of helplessness and hopelessness, common complaints of the depressed suicidal person.

Symptoms

Generally, marked and persistent change in behavior and/or mood is the most significant sign of a child in difficulty with depression. The American Psychiatric Association (APA) lists the following 14 key behaviors that may indicate risk:

1. Sudden drop in school performance

- Reduced class participation (sometimes withdrawing completely).
- Sudden lowering of grades in all or most subjects.



- Failure to meet school expectations previously met.

2. Loss of interest in activities

- Quitting a part-time job, school activity, club, or sports group.
- Less “hanging out” with peers at usual times and locations.
- Isolating self.
- Not responding to telephone calls as usual.

3. Fatigue

- Sleeping too much or too little.
- Dramatic change in energy levels (sometimes hyperactivity).
- Sleeping in class.
- Appearing lethargic and apathetic in class.

4. Inability to concentrate

- Inattentiveness.
- Unable to respond when called upon.
- Frequent responses of “I didn’t hear [understand] the question.”

5. Outbursts of shouting, complaining, or unexplained irritability

- Crying often and easily, sometimes for no apparent reason.
- Rebelliousness with peers and/or school personnel.
- Unusual displays of irritability.

6. Expression of fear or anxiety

- Apprehension in ordinarily comfortable settings.
- Concerns that others are “after” him or her.

7. Aggression, refusal to cooperate, antisocial behavior

- Breaking common, easy-to-comply-with rules.
- Messy, unclean appearance.
- Using obscenities and negative responses in everyday discussions.
- Avowed disinterest in succeeding or completing basic assignments.
- Increasing absences or lateness.



8. Change in peer group

- Seems to be abandoning usual close group or type of friends.
- Seeking friends in groups with bad reputations.

9. Somatic complaints

- Complaining more of illness, headaches, or stomachaches.
- Eating problems (loss of appetite or constant hunger).
- Signs of injuries (self-inflicted, resulting from risky behavior).

10. Alcohol and/or other drug abuse

- Frequent intoxication or drugged appearance (80% of suicides are substance abusers).
- Appearance of objects associated with alcohol or other drug use.
- Sudden need for more money (may be stealing, seeking another job, or asking others for money).

11. Recurring thoughts or statements about death or suicide

- Written or verbal statements reflecting helplessness and hopelessness.
- Acquiring a weapon, rope, pills, or other potentially lethal device.
- Talking about risky behaviors.
- Fixation on a tragic theme or event (often the death of a famous person).

Any of the following indicators must be viewed as very serious and responded to immediately:

12. Making final arrangements and/or amends

- Giving away possessions, especially prized ones.
- Paying off old debts.
- Apologizing for past (often long past) behavior.
- Talking about desired funeral arrangements.
- Sudden dramatic improvement in mood and behavior.

13. Loss

- Death of friend or relative (especially if more than one in a short time).



- Suicide of another student in the school.
- Break-up with boy/girlfriend.
- Break-up of family.
- Diagnosis of health problems in self, family member, or friend.
- Incarceration of loved one.

14. Previous suicide attempt

- Any child who has made a previous attempt and is now displaying any of the above behaviors must receive help from a mental health professional immediately. An estimated 80% of all completed suicides have been preceded by a failed attempt.

What Schools Can Do

No one teacher or other school professional should feel responsible for, or decide alone how to proceed with, a potentially suicidal student. Every school professional should learn how to respond to a student's request for help and also how to react if other warning signs are noticed. In addition, every school system and every school should have a crisis protocol, a crisis team, and community resources available to deal with suicidal students and other crisis situations (also see Chapter 2 for guidelines on the development of collaborative interdisciplinary teams to deal with such issues).

- Implement a primary suicide prevention program, teaching staff, parents, and children to be aware of the seriousness of suicidal comments and how to ask for help promptly if they have such thoughts or know of someone else who is having such thoughts.
- If someone has talked about suicide, discuss it with a school psychologist, counselor, school nurse, principal, or other designated person *immediately*.
- Try to avoid displaying shock or disapproval if someone discloses suicidal thoughts.
- Show the individual you are truly concerned and that you are taking the disclosure seriously.
- Tell the individual that suicidal intents or thoughts cannot be kept confidential and that you must report them to the appropriate person immediately. Remind the individual that this is because you care and want to get him or her needed help.
- Do not leave an individual alone if the risk of suicide is high. Take him/her with you to get help, or call or send someone else for help.

A crisis manual should have:



- A checklist of procedures to follow in the event of a crisis, including responses to clear-cut or suspected suicidal thoughts or intent.
- A list of crisis intervention team members and their telephone numbers.
- A list of community resources (including address and telephone number) such as Department of Social Services, the local mental health agency, Suicide Hotline, AIDS Hotline, National Runaway Switchboard, police and fire departments, and local or regional addiction and psychiatric resources.

Divorce

It is estimated that about half of all children in the United States will spend part of their lives in a single-parent family. Given this statistic, it is likely that every school will have at least some children of divorced or divorcing families in every class. Indeed, it is not uncommon for a high proportion of children in a classroom to have divorced parents.

Divorce is a time during which a child must learn to achieve a new balance. It is a time of loss, growth and change. Children may experience a wide range of emotions — anger, grief, guilt, and sadness among them — following a divorce. Separation or divorce may be experienced as a relief for some, particularly if there has been constant conflict or abuse. Predictably, it is a time of stress. Divorce can affect children from the same family in very different ways as well; it is important not to presume to know how any given child will react to the situation.

There is considerable variability in how children cope with divorce and separation. In addition to causing varying degrees of disruption and stress for the entire family, divorce may also result in a change in financial status for children. This may necessitate relocation, restricted ability to participate in school events and programs, and restrictions in one or both parents' involvement in school programs. Children may also experience behavioral or academic performance problems in schools and an overall drop in self-esteem.

Children may also experience a sense of helplessness, and lack of control over their life situation. There may be continuing tensions between parents over arrangements for the child. Parental work patterns may change and the child may have less contact with one or both parents.

Symptoms

All of the following behaviors may be indicative of normal reactions to divorce if they are not very severe, protracted, or numerous (if these symptoms persist or become more severe, then the child may need additional help from a mental health professional):

- Inability to concentrate.
- Drop, often extreme, in school performance, or perfectionist obsession with school performance, or grades.



- Crying for no apparent immediate reason.
- Displays of anger, acting-out, sullenness, or rebelliousness.
- Loss of enthusiasm, sense of humor, or joy.
- Regression to outgrown self-comforting behaviors such as thumb sucking.
- Development of tics or nervous behaviors such as nail biting or hair pulling.
- Withdrawal or isolation of self.
- Loss of memory or inability to follow directions.
- Development of an intense need to please.
- Pervasive sadness.
- Rejection of one parent.

What Schools Can Do

The school represents a safe environment for the child of divorcing parents. Educators can help by being supportive of all children, being alert to signs of failure to cope, and by having a plan to help children experiencing difficulty. Schools should set the tone that both parents are important partners in the family-school relationship. Educators can respond in the following ways to try to help children cope:

- Offer teachers consultation on various reactions children may have to divorce.
- Keep in touch with parents about the child's school experience.
- If the parents or child self disclose, explain that you know that, during divorce, children may feel strong emotions that sometimes may make it hard to pay attention in school or do school work as well as usual. Encourage the child to talk to a trusted adult when feelings get to be overwhelming. Continue to monitor the child and to offer support.
- When there is concern in any way about the severity of a child's reaction, lack of signs of recovery, or any other aspects of behavior, contact the parents for referral of the child to a mental health professional immediately.
- Encourage participation in a divorce support group, if appropriate and available.
- Whenever appropriate, arrange for all parents to receive information from the school and for all parents to attend conferences and other school events.

- Do not presume that there are two biological parents in any home. Sensitivity to children living in single parent families, with guardians, or in households with other relations or responsible adults is key to validating a child's sense of well-being.
- If appropriate, become familiar with the child's schedule for seeing parents. The change in routine may be confusing for the child and it may help the child to know that you are aware of the changes.

Grief

It is difficult to estimate the proportion of children in a school who are grieving as the result of experiencing significant loss. Perhaps the most common type of loss experienced by school-aged children is the death of a significant other. Some children lose grandparents during their years at school, and others may lose parents, siblings, friends or other emotionally significant individuals. In addition, the death of a pet may be a traumatic event. Sometimes students and school personnel are forced to deal with the death of a classmate or staff member. Few teachers, school nurses, and other school personnel go through their careers without having a student who is grieving.

It is important to recognize that grief is a normal and necessary reaction to any type of loss. Children who are grieving need to be given as much time and opportunity as they need to grieve. It is crucial that school staff not try to "fix," repress, or overlook children's grief. Children's grief behavior may differ from that of adults. Also, they may or may not openly mourn. Sandra Fox, founder of the Good Grief program, suggests that three tasks for bereaved children are understanding, grieving, and commemorating. Some of the emotions that grieving children and adolescents experience are denial, acting out, withdrawal, guilt, and depression.

What Schools Can Do

No one can prevent, nor should they try to prevent, the natural course of grieving. These are normal reactions that take time to resolve. Talking with a trusted adult can help a child understand some of the feelings and thoughts that accompany grief. The following are some suggestions for school personnel who are dealing with a grieving child:

- When talking with a child, use appropriate language that the child can understand.
- Younger children may regress to outgrown behavior, such as thumb sucking, hair twisting, or other self-comforting behaviors. Educators should remember that these regressions are temporary and they should continue to support the child during this phase. It is also important to prevent any teasing from other children about these behaviors.
- Some children may fear that they too will die or that someone else close to them may die soon. They need the opportunity to express these fears and be reassured.



- Children may need to ask the same questions about death many times. Adults should encourage these and be patient while supplying the same honest, simple answers over and over.
- Children should be reassured that any negative thoughts they may have had about the person who died did not cause the death.
- Use everyday events in children's own lives to help them understand and talk about death and dying, for instance, pets' deaths, newspaper or television reports of death, and the birth and death of the changing seasons.

Disruptive Behavioral Disorders

Disruptive behavioral disorders may occur in the school-aged population. According to the American Psychiatric Association (APA), such disorders are characterized by actions that are socially disruptive and distressing to others. The essential feature, says the APA, is a persistent pattern of conduct in which the basic rights of others and major age-appropriate societal norms or rules are violated.

Different disruptive behavioral disorders have different causes. However, generally they result when a child has difficulty forming healthy relationships with significant others, especially family members. The two major disruptive behavioral disorders discussed here are conduct disorders and oppositional defiant disorder.

Conduct disorders have at their root hostility, which may be obvious (as in the destruction of property or cruelty to animals and people) or more subtle (as in persistent lying and stealing). Conduct disorders include such behavior as running away, stealing, lying, school truancy, fire setting, and cruelty. *Oppositional defiant disorder* is characterized by argumentativeness, frequent loss of temper, swearing, constant anger, resentfulness, and being easily annoyed by others. Children with this disorder tend to blame others for their own mistakes or difficulties. They do not typically, however, have a pattern of violations of the rights of others as do children with conduct disorders.

What Schools Can Do

Disruptive behavioral disorders are manifestations of serious psychological problems. Because educators may see such a disorder in the classroom and may have to defuse a situation, the most useful thing educators can do is to make themselves aware of the disorders and their symptoms and resolve to bring such problems to the attention of school health professionals as soon as possible. Referral for a Special Education evaluation is one intervention a teacher can initiate. Teachers, parents, and mental health professionals should work together to establish a plan to manage inappropriate classroom behavior.

Attention Deficit Disorders

Attention deficit disorders are classified by the APA as only one type of disruptive behavioral disorder. However, attention deficit disorders are being considered separately here because they are such common problems in American schools. According to Russell Barkley, attention deficit hyperactivity disorder (ADHD) is the leading psychiatric

diagnosis in American children. These disorders were at one time all lumped together under the term *hyperactivity*. However, research shows that attention deficit can also occur without hyperactivity, now diagnosed separately as attention deficit disorder (ADD).

Three to ten percent of all school-age children and adolescents, or roughly 5 million children nationwide, have ADHD or ADD. Three-quarters of those children with the disorders are male, and 3% to 5% of them experience significant educational problems associated with the disorders. ADD/ADHD can affect academically bright, average, and below-average children alike. Approximately 30% of children suffering from ADHD/ADD will experience the disorder in adulthood as well.

No one knows exactly what causes ADD/ADHD, although most experts believe there is a physiological explanation — perhaps a single gene that predisposes people to a variety of disorders. Family members of children with these disorders may have ADD/ADHD as well as other problems such as depression, anxiety, antisocial behavior, and substance abuse. Other experts think that ADD/ADHD is caused by a deficiency in some of the neurotransmitters in the brain (norepinephrine or dopamine) that are thought to regulate attention and the ability to focus and control oneself. The deficiency in neurotransmitters is thought to result from fetal maldevelopment or genetic transmission.

Most psychiatrists believe that no child-raising techniques can produce ADD problems in a child who is not physiologically predisposed to it. While a child's social and family life may affect the child's experience of ADD, it has not been proved to cause the disorder.

Symptoms

The disorder manifests with a combination of symptoms which are more intense in some children than in others. Different symptoms are found for ADD and ADHD. Intensity, patterning, and persistence of symptoms must be examined to make a proper diagnosis.

According to the APA, to be diagnosed with ADD, children must exhibit at least six symptoms from the list below, present problems for at least 6 months, have symptoms that are developmentally inappropriate, and have no more than four symptoms from the symptom list for ADHD.

ADD Inattention Symptom List

- Often has difficulty following through on instructions.
- Often has difficulty sustaining attention.
- Frequently seems not to listen.
- Often loses things necessary for tasks.
- Fails to give close attention to details.
- Often is disorganized.
- Frequently makes careless mistakes in schoolwork.



- Often is forgetful.
- Daydreams when should be paying attention.
- Unmotivated to complete schoolwork or task.

Youngsters with ADD may be perceived as stupid, lazy, stubborn, and defiant if they are unable to produce in a classroom setting. They tend to be overlooked in school because although they are not producing, they are not disruptive. They may be isolated and withdrawn, slowly losing self-esteem as they fail repeatedly at school tasks. These children are at risk of drifting away from school when they are old enough to do so.

ADHD is characterized primarily as a disturbance of hyperactive-impulsive behavior that is frequently, but not necessarily, associated with inattention. According to the APA, in order to be diagnosed with ADHD, children must exhibit five symptoms from the list of hyperactive-impulsive behaviors (below), have problems for at least 6 months, and exhibit six symptoms from the inattention list (above). If they are below age 7, only five symptoms need to be present.

ADHD Hyperactive-Impulsive Symptom List

- Often has difficulty awaiting turn in group situations.
- Frequently interrupts or intrudes on others.
- Blurts out answers to questions.
- Has difficulty playing quietly.
- Often leaves seat.
- Frequently runs around or climbs excessively.
- Often fidgets or squirms.
- Talks excessively.
- Acts as if driven by a motor and cannot remain still.

Youngsters with ADHD are likely to live with rejection from teachers, parents, and peers because they have trouble controlling their behavior. A typical development profile includes irritability, colic, and sleep disturbances in infancy. As a toddler the child is active in a troublesome way, may disrupt the environment more than the average child and may be unable to listen or respond to parental discipline. During the preschool years, the child has social adjustment problems, difficulty making and keeping friends, temper tantrums, can be domineering, and is teased frequently. By first grade, teachers typically have noticed that the child cannot sit still and is easily distracted. Academic problems appear early but are commonly attributed to immaturity or academic unreadiness.

In adolescence, the symptoms are the same but are manifested in different ways. Peer rejection is common for ADD/ADHD adolescents, resulting in increasingly lowered self-esteem. Due to lack of

acceptance as a result of social and conduct difficulties, many adolescents either are forced to associate with any group that accepts them or they spend more and more time alone. Academic work may continue to be affected by the inability to concentrate, and opportunities for risk-taking may be sought to gratify their need for self-esteem.

What Schools Can Do

In-service training for teachers and other staff on the issues of ADD and ADHD are helpful. While there is as yet no known way to prevent ADD, there are many interventions that have proved to be helpful. Identification of the problem is the first step, and requires the cooperation of teachers, parents, school nurses, mental health professionals, and pediatricians. Proper screening typically includes an extensive interview with the parent, an interview with the child, completion of rating scales, and direct observation of the child in the classroom.

According to Ingersoll, a combination of educational, psychological, and medical interventions is typically developed, and treatment requires the full cooperation of teachers and parents working closely with other professionals. Research has consistently shown that medication is most effective when coordinated with academic and psychosocial measures. Regardless of whether or not medication is prescribed, the other methods can greatly assist the child, family, and school.

Educational Interventions

- Provide a conducive learning environment. Seat the student where there is a minimum of distraction, encourage peer tutoring, and provide a quiet study area.
- Provide specialized instruction with frequent eye contact. Be clear and concise; simplify, break down and repeat instructions.
- Provide supervision and discipline. Have established consequences for misbehavior, administer consequences immediately, enforce rules consistently, and avoid ridicule and criticism.
- Enhance self-esteem through encouragement and praise.

Psychosocial Interventions

- Social skills training to provide successful peer contacts and positive experiences, to increase knowledge about appropriate behavior, and to improve the child's popularity with the peer group.
- Family and individual counseling.
- Behavioral modification program at home and in school.



Medical Interventions

- Use of Ritalin, Dexedrine, or Cylert as prescribed by the child's pediatrician or other medical specialist. Side effects of sleeplessness, weight loss, or allergic reaction can usually be prevented if dosages are carefully monitored and adjusted as necessary. About 70% of youngsters diagnosed with ADD/ADHD are helped by medication.

Eating Disorders

Eating disorders present complex clinical problems which involve physical changes based on either incessant dieting or repetitive bingeing and purging. The majority of individuals who experience eating disorders are adolescent females. Adolescence is characterized by intense preoccupation with appearance, especially body weight, and a societal and cultural emphasis on thinness affects how adolescent females feel about their weight. (See also Chapter 9 for a discussion of the impact of eating disorders on nutritional health.)

There are marked psychological difficulties that lead to the development of an eating disorder and reinforce its persistence. Adolescent females who have a strong sense of not being in control of their lives are more likely to develop eating disorders. The ability to control food intake and lose weight is experienced as taking control.

Personality traits of low self-esteem, frustration, and intolerance are found in eating-disordered children and teens. In addition, an impaired ability to recognize and directly express feelings (especially anger), depressive symptoms, irritability, and a sense of shame and guilt have been associated with eating disorders.

A person with eating disorders has a general mistrust of health care providers, due to her own secrecy and embarrassment about the problem. One of two responses can be expected from a teenager approached about an apparent eating disorder: straightforward denial of difficulties or a refusal to participate in rehabilitation. These responses reflect an overwhelming fear of letting go of the problems and, thus, a return to a state of perceived weakness, depression, and helplessness.

What Schools Can Do

- Classroom education as part of the comprehensive health education curriculum should contain opportunities for learning and discussion about societal attitudes about weight and appearance.
- Coaches, school nurses, and teachers should observe students' body appearance and discuss the impact of eating disorders with students who appear to be at risk.
- Because of the serious danger of eating disorders to physical health, concerns should be shared with the school health or mental health professional who should consult with the student and parent for a referral to the student's primary health care provider.

School Phobia

School phobia may be a fear of leaving home rather than a dread of going to school. Or, it may have a basis in the child's experience in school or traveling to or from school. It is not an extremely common problem, but it can be very disruptive for the child, the family, the teacher, and the school. Mild school phobia in young children is not unusual, nor is it likely to represent severe underlying problems; persistent severe school phobia requires professional evaluation of the underlying emotional problems. School phobia after puberty is rare and is usually serious; an adolescent may eventually be diagnosed with marked personality difficulties that can be associated with schizophrenia, depression, or suicidal tendencies.

Children with school phobia may fear that their parents or someone close to them will be hurt or that something else terrible will happen when the children are away from them. Many children worry that accident or illness will befall their parents or themselves. Many times children do not clearly know what they fear but feel strongly that something bad will occur. This sometimes happens when someone at home is sick or someone such as a grandparent dies.

School phobic children experience great anxiety, amounting at times to panic. They may cry and complain of the physical symptoms that accompany this marked anxiety. Nausea, vomiting, headache, sore throat, dizziness, or respiratory problems are common symptoms. At first, the children's panic produces the physical symptoms, but after a few weeks, the physical complaints may become an ingrained factor which keeps them at home. Educators become aware of school phobia only when it is already present. That is, there is little an educator can do to prevent the development of school phobia.

What Schools Can Do

- Clinical experience suggests that school phobia is effectively treated by a variety of supportive therapies and by consultation and cooperation between parents, mental health professionals, and teachers.
- In treatment, a child attends school every day, regardless of his or her fear of it. Getting the child to school requires firmness and stern patience. Parents may accompany the child to school and occasionally stay for a short while.
- A teacher can help by following the suggestions of the mental health professional in consultation with parents when dealing with the school phobic child.
- Other children should be prevented from teasing the school phobic child.

Psychosomatic Illnesses

Psychosomatic illnesses which may occur among children and adolescents are disorders caused by a combination of organic and psychological factors. Persistent or frequently recurring symptoms such as headache, stomachache, nausea, diarrhea, and palpitation are often difficult to diagnose. Some children may be predisposed to psychosomatic illness because of specific physiological vulnerabilities.



Psychosomatic illnesses result when an individual experiences persistent exaggeration of the normal physiological expression of emotion. For example, it is common for an individual to get a headache in a stressful situation. Most recognize that the headache is a result of being stressed and take steps to reduce or withdraw from the stress. Others, especially children, may not recognize the connection between the symptom (headache) and the cause (worry about the big test tomorrow). The headaches may persist because the child does not recognize and deal with an underlying problem: fear of tests.

In *primary disorders*, a physiological problem (such as diabetes or asthma) is already present. The psychosomatic element is the aggravation of already existing symptoms. Thus, a child with diabetes may actually develop recurrent bouts of metabolic imbalance triggered by emotions. A child with asthma may have severe attacks at times of extreme emotional stress. In both cases, there is a physiological illness present.

In *secondary disorders*, no preexisting medical problem can be found. Thus, the child with headaches due to test anxiety may undergo a battery of tests that produce no physiological evidence to explain the headaches. It should be noted, however, that it is likely that headaches and other physical symptoms are as real and painful as are those of someone with a medical diagnosis.

Following is a list of some of the most commonly seen psychosomatic illnesses in children (according to the APA DSMMD III):

- *Asthma*. Bronchial asthma is typically caused by allergic reactions, but in some cases emotions and stress can trigger an attack. (See Chapter 7 for a discussion of asthma as a chronic health condition).
- *Stomach problems*. Emotions have a marked effect on the gastrointestinal system. When a child is upset, the appetite may diminish or nausea may occur. Vomiting may be induced by anxiety which can become serious if it consistently involves the child avoiding dreaded situations. A large proportion of complaints such as upset stomach, heartburn, stomachache, and diarrhea are likely to be caused by reactions to emotional stress.
- *Headaches*. Simple headaches (not migraine) may be the result of tension or stress. They can also result from hunger or lack of sleep, which is why a thorough assessment/interview is needed. Migraine headaches are uncommon in children under age 12, but they may begin during adolescence and must be monitored by a health care provider.
- *Urinary incontinence (enuresis)*. Enuresis is common in childhood. When there are no abnormalities found in the physical examination, it is likely that enuresis is caused by emotional factors. Enuresis may be a sign of anxiousness or insecurity in some, and, in overaggressive children, unexpressed anger may manifest itself in this and a wide range of other

behavioral and symptomatic disturbances. Even without treatment, the majority of children outgrow their enuresis by puberty or early adolescence. In a very small percentage of cases, it can persist into late adolescence.

- *Encopresis.* Encopresis may be defined as fecal soiling after successful toilet training. The main cause of this problem is constipation, resulting in overflow incontinence. It is important to know that affected children are often unaware of their accidents and unable to control them. While the origin of encopresis is frequently physical or environmental, it may also be psychological. The school environment, the school bus, the busy routine of the school day, and lack of privacy in school bathrooms are some of the factors which can lead to withholding behavior resulting in constipation and/or leaking of stool.
- *Cardiovascular system.* Anxious children may experience a prolonged rapid heart rate (tachycardia). The child may describe it as a "pounding heart" or "racing pulse" and may fear that a heart attack is impending. This fear of heart attack increases the anxiety which aggravates the tachycardia, thus setting up a vicious cycle.
- *Psychosomatic skin disorders.* Most cases of skin rash (urticaria) are due to disease or allergic reactions; other cases may be caused by emotional stress. Urticaria due to emotional stress usually occurs on the neck, face, and arms, although it may appear over the entire body. It is more common in girls than boys and occurs more frequently in adolescents than younger children.
- *Diabetes.* Although there has been much speculation about possible psychosomatic causes of diabetes, there is little convincing evidence that emotional factors play a significant role in its etiology. Nevertheless, the emotional state of a diabetic child may have a marked effect on the course of the illness. Deviations from the prescribed medication or diet may result in serious medical emergencies.

What Schools Can Do

School health professionals should attempt to determine whether or not an ailment is a physical disorder or caused by emotional factors. If treated early, many psychosomatic illnesses will not become chronic problems. Therefore, it is important for school personnel to pay close attention to illnesses in children. Children who have frequently recurring episodes of the same symptoms should be referred to their primary care provider.

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RESOURCES

Massachusetts Regional Prevention Centers. See Section IV of this manual.

Department of Mental Health Area Offices. The director of child-adolescent services or the children's case managers of the area offices of the Department of Mental Health (DMH) can provide information about local mental health resources and services available to the community on a sliding-fee scale. Area offices can connect parents with the DMH parent support coordinators and support groups within their areas.

Western Massachusetts Area Office
Northampton State Hospital
PO Box 389
Northampton, MA 01061
(413) 584-1644

Central Massachusetts Area Office
Worcester State Hospital, Bryan Building
305 Belmont Street
Worcester, MA 01604
(508) 752-4681

Northeast Area Office
Tewksbury State Hospital
PO Box 387
Tewksbury, MA 01876
(508) 777-4506, (617) 727-4610

Metro West Area Office
Westboro State Hospital
PO Box 288, Lyman Street
Westboro, MA 01581
(508) 366-4401



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Southeastern Area Office
Brockton Multi-Service Center
165 Quincy Street
Brockton, MA 02402
(508) 580-0800, (617) 727-7905

Metro Boston Area Office
20 Vining Street
Boston, MA 02115
(617) 727-5500

Federation for Children with Special Needs
95 Berkeley Street, Suite 104
Boston, MA 02108
(617) 482-2915, (800) 331-0688

Provides information about services for children and parents of children with special health care needs, including mental health needs. The federation is the host organization for Parent/Professional Advocacy League, which provides information and parent support groups for parents of children with mental health, emotional, or behavioral problems.

Alliance for the Mentally Ill of Western Massachusetts
Child Adolescent Network
(413) 562-2143

Information and referral services and support groups for parents within the western region of Massachusetts. The focus is on seriously mentally ill children and adolescents.

Massachusetts Mental Health Center: Youth and Families
74 Fenwood Road
Boston, MA 02115
(617) 734-1300

Information on mental health services and issues in Massachusetts.

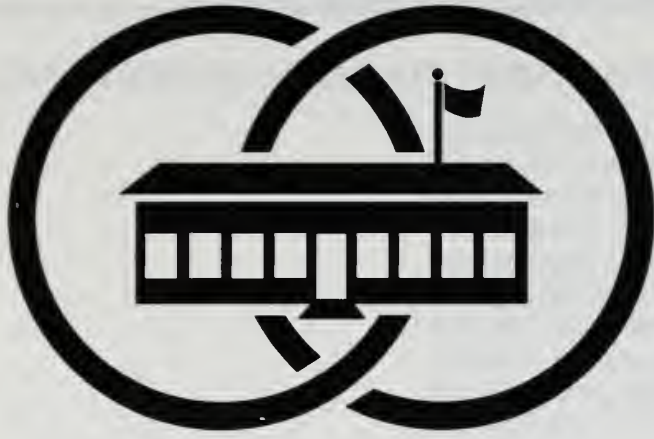
Samaritans Suicide Hotline for Teens
500 Commonwealth Avenue
Boston, MA 02215
(617) 247-8050, (617) 247-0220, (800) 252-8336

Anorexia Bulimia Care
545 Concord Avenue
Cambridge, MA 02138
(617) 492-7670

Referral services, information, and support groups for people with anorexia and/or bulimia.

Overeaters Anonymous
60 Massachusetts Avenue
Arlington, MA
(617) 641-2303

A twelve-step program for people with food addiction.



Chapter 12

SEXUALITY AND REPRODUCTIVE HEALTH

Overview of Sexuality Education

Sexual Activity Among Massachusetts Youth

Guidelines for Comprehensive Sexuality Education

The Role of Parents and Families in Sexuality Education

Sexual Development

Recommendations for Physical Examinations

Decision Making Regarding Sexual Activity

Prevention of Adolescent Pregnancy and STDs

Adolescent Pregnancy

Other Sexuality Issues



Chapter 15

Exercises and Problems

1. Let $f(x) = x^2 + 1$ and $g(x) = x^2 - 1$.

(a) Find $(f+g)(x)$ and $(f-g)(x)$.

(b) Find $(fg)(x)$ and $(f/g)(x)$.

(c) Find $(f \circ g)(x)$ and $(g \circ f)(x)$.

(d) Find $(f \circ f)(x)$.

(e) Find $(g \circ g)(x)$.

(f) Find $(f \circ g \circ f)(x)$.

(g) Find $(g \circ f \circ g)(x)$.

(h) Find $(f \circ f \circ f)(x)$.

(i) Find $(g \circ g \circ g)(x)$.

(j) Find $(f \circ g \circ g)(x)$.



OVERVIEW OF SEXUALITY EDUCATION

Sexuality education, as defined by the Sex Information and Education Council of the United States (SIECUS), is a lifelong process of acquiring information and forming attitudes, beliefs, and values about identity, relationships, and intimacy. Such a process encompasses sexual development; the evolvement of body image and gender roles; reproductive health; and expressions of affection and intimacy. Sexuality education addresses the biological, socio-cultural, psychological and spiritual dimensions of sexuality from the cognitive, affective, and behavioral domains, including the skills to communicate effectively and make responsible decisions.

The school's role in sexuality education and related health services may be a controversial, difficult, and value-laden issue for communities today. Whatever role a school district plays, its approach must be reflective and respectful of the values of both parents and the community. Effective sexuality education requires a public health approach to health promotion and illness prevention and should encompass both factual information and decision-making skills. Should sexuality education be undertaken by a school district, it is important that those professionals responsible for teaching the subject be skilled in using the curriculum. Staff training and professional development specific to this area are essential in order to provide teachers with the skills necessary to give students adequate information to make informed behavioral choices.

The Massachusetts Department of Education does not mandate that school districts offer sexuality education, but if they do, the Department recommends that sexuality education curricula include accurate information on sexuality within the context of comprehensive school health education. It is especially important to stress the prevention of the spread of a life-threatening illness such as HIV/AIDS, other sexually transmitted infections, and the occurrence of adolescent pregnancy. Comprehensive sexuality education can provide students with a framework to address complex and critical social and health issues; inaccurate information about sex and sexuality can result in making decisions that may lead to serious endangerment of their well-being and their lives.

This chapter is intended to assist administrators, school health staff, teachers, and parents in developing sexuality education within the context of a comprehensive health education program. It presents a general overview of the issues, principles of program development, aspects of physical sexual development, related developmental issues, and resources for schools.

SEXUAL ACTIVITY AMONG MASSACHUSETTS YOUTH

The Massachusetts 1993 Youth Risk Behavior Survey, published by the Massachusetts Department of Education in 1994, found that:

- One-half of Massachusetts high school students surveyed reported having had sexual intercourse at least once
- One-third reported having sexual intercourse within the last three months



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- Three out of ten high school students who have had sexual intercourse reported having four or more partners
- Thirty-three percent reported using no contraception the last time they had sexual intercourse
- Twenty percent reported using alcohol or drugs the last time they had sexual intercourse

It is clear that a large number of students are not adequately prepared or motivated to make responsible sexual decisions or to use methods of protection to prevent pregnancy, STDs, and HIV/AIDS. The need to reduce these risks is paramount. Sexuality education provided in schools and by parents and families is an important means by which to reduce the risks.

GUIDELINES FOR COMPREHENSIVE SEXUALITY EDUCATION

The scope and content of sexuality education in the schools is being intensely debated in many communities by the proponents of abstinence-based education versus proponents of abstinence-only education. “Abstinence-based” education promotes postponement of sexual intercourse until adulthood and provides information about sexuality and contraception. “Abstinence-only” education promotes abstinence from sexual intercourse and activity until marriage and does not typically include information about contraception.

Questions pertaining to cultural and religious values are among the most difficult issues facing educators developing age-appropriate sexuality education programs. School-based programs are best developed in a way that respects the diversity of values and beliefs represented in families throughout the community. Also, basic human and social values such as responsibility, family unity, and respect for others, are key.

Research indicates that programs that provide young people with comprehensive information about abstinence, as well as contraception and safer sex practices, are the most effective in reaching young people. Research further indicates that young people who have had comprehensive sexuality education are no more likely to have sexual intercourse than those who have never taken a course. Furthermore, among those teenagers who are having sexual intercourse, students who have had sexuality education classes are significantly more likely to use contraception than those who have not (Zelnik & Kim; Marsiglio & Mott; Dawson; Kirby et al.; Howard & McCabe; Girls Inc.).

In 1990, SIECUS convened a National Guidelines Task Force to develop guidelines for schools across the nation to use as a framework in developing sexuality education programs. The task force was comprised of professionals from the fields of medicine, education, sexuality and youth services, and organizations such as the American Medical Association, March of Dimes Birth Defects Foundation, Planned Parenthood Federation of America, National Education Association, American Social Health Association, U.S. Centers for Disease Control, and the National School Boards



Association. This national Task Force developed topics concerning values, life behaviors, and developmental messages appropriate for K-12th grade which are now published as the *Guidelines for Comprehensive Sexuality Education: Kindergarten–12th Grade*.

The Guidelines for Comprehensive Sexuality Education: 1) promote and facilitate the development of comprehensive sexuality programs nationwide and 2) provide a framework for developing curricula, textbooks, and programs, as well as for evaluating existing programs.

The *Guidelines* outline four primary goals of comprehensive sexuality education:

1. To provide accurate information about human sexuality
2. To provide an opportunity for young people to develop their own values, acquire enhanced self-esteem, develop insights into their relationships with members of both genders, and to better understand obligations and responsibilities to themselves and others
3. To help young people develop interpersonal skills, including communication, decision making, peer refusal and assertiveness skills which will allow them to create satisfying relationships
4. To help young people develop the ability to exercise responsibility regarding sexual relationships, including abstinence, resisting pressure to become prematurely sexually involved, and using contraception and other measures related to promoting sexual health and well-being

The *Guidelines* consist of six key concepts that encompass the components of a broad definition of sexuality: 1) Human Development, 2) Relationships, 3) Personal Skills, 4) Sexual Behavior, 5) Sexual Health, and 6) Society and Culture. Each concept is addressed in age-appropriate instructional levels reflecting four stages of development:

Level 1: Middle Childhood (ages 5 through 8); early elementary school

Level 2: Preadolescence (ages 9 through 12); upper elementary school

Level 3: Early Adolescence (ages 12 through 15); middle school/junior high school

Level 4: Adolescence (ages 15 through 18); high school

Professional health educators recommend comprehensive K-12 programs, with courses at each grade appropriate to the age and developmental level of the students. A professional development program for selected school personnel complemented by collaborations with resource professionals from the community can be a



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highly effective approach to providing expert sexuality education for students.

The school nurse and physician may play a unique role in promoting sexual and reproductive health in the school setting. They may participate in teaching in the health education program, assist parents in promoting healthful behavior, identify students at risk for teen pregnancy and/or sexually transmitted diseases, refer students for appropriate care, and promote the health of teen mothers and their children.

THE ROLE OF PARENTS AND FAMILIES IN SEXUALITY EDUCATION

Sexuality and social values are commonly considered the sole purview of the individual and the family; parents and family members are children's earliest and most important teachers about sexuality. From birth, the child begins to learn about sexuality and sex roles from those around him or her. Basic values, beliefs, and sexual socialization are established within the home environment.

Parental involvement is key to the success of school-based sexuality education programs; the better informed the parent, the better the chance of a positive school/home partnership. Some Massachusetts school health education programs have responded by providing programs for the parents of elementary and middle school children that inform them about the content of school-based sexuality education and teach skills and impart information that will help parents respond to the needs of their children and adolescents.

Sample activities for including parents:

- Discussion groups about issues in sexuality education for parents/guardians
- Information sessions about problems associated with adolescent sexual activity or with such issues as child sexual abuse
- Partnerships with existing parent/guardian groups (PTA, Parents Without Partners, religious institutions, social and service clubs, foster parent or grandparent support groups) to conduct sexuality education workshops
- Parents/guardians participation in planning and evaluation of school sexuality education curriculum
- Resource (books, videos, pamphlets, fact sheets) availability for parents/guardians to assist them in their role as their children's sexuality educators

SEXUAL DEVELOPMENT

The following information is an overview of the major topics included in comprehensive sexuality education and is included here as a reference, not as a curriculum, for health educators and health services personnel.



The development of secondary sex characteristics is the most prominently noted change experienced by adolescents during puberty. Genetic, hormonal, and nutritional factors influence the pace and timing of the events which herald the arrival of reproductive capacity: in females, increase in size of ovaries and ovulation, breast development, the appearance of pubic hair, and menstruation; and in males, growth of testes and penis, appearance of pubic hair, and sperm production.

In the 1950's a British physician, Dr. James Tanner developed a system for classifying stages of observable pubertal development, or sexual maturity ratings (SMR). Tanner staging describes breast and pubic hair development in females and testicular and penile, and pubic hair development in the male. For each of these areas stages are described, beginning with Stage I, which is prepubertal where no change is observed, through Stage V where full adult external genital, breast and pubic hair maturity has been reached.

This system is often used to record the status of sexual development in the medical record. It is useful for identifying developmental delays or precocious development and for estimating growth patterns because many physical changes observed in males and females, especially during early and middle adolescence, are the result of stimulation by sex hormones. In evaluating physical and sexual maturation it is important to remember the broad variation in timing and pace of the appearance of secondary sex characteristics and adult stature.

Female Sexual Development

The first change to take place in female reproductive development is growth in size of the ovaries, followed by the development of breasts or pubic hair. In most females the appearance of the breast bud precedes pubic hair growth. The growth of pubic and body hair is stimulated by androgens from the adrenal glands and usually coincides with breast development in females and with enlargement of the testes in males.

Breast development (thelarche) is usually the first visible change for females in puberty; the tissue under the areola enlarges in response to estrogen produced in the ovaries. This results in breast budding, at an average age of 11 years, with a normal range between 9 and 13 years.

Normal breast development may be affected by hormone variations and/or conditions that radically change nutritional status such as eating disorders, as much of breast tissue is fatty tissue and marked weight loss can cause breast atrophy. Recent evidence suggests there may be environmental factors that influence the rate and quantity of breast development. While breasts typically develop according to Tanner staging, variations such as breast asymmetry (one breast larger than the other) are common and often resolve themselves.

The two breast functions are milk production and sexual responsiveness. Fatty tissue protects the milk-producing glands, and an intricate duct system channels milk to the nipple. Ligaments in the chest wall support the breast, but the breast itself contains no muscle. Nipples are erectile tissue and are responsive to tactile sensations.



Each nipple is surrounded by a pink or brown circle of skin (areola) that is also responsive to tactile stimulation. The areola may be sparsely ringed with hair.

Breasts are responsive to cyclic hormonal changes. Many women experience enlarged, tender breasts before menstruation and during pregnancy. The nipple and areola often darken in color during pregnancy.

Pre-teens and adolescents are generally sensitive to the many changes that occur in their bodies during puberty, and many may magnify or mask their concerns. It is important for adults to be supportive and provide accurate information about bodily change during puberty.

Menstruation and Ovulation

Menarche, the onset of the menstrual cycle in females, occurs at an average age of 12.5 years; most girls experience menarche between the ages of 10.5 to 14.5 years. As with sexual development in general, the timing of the first menstrual cycle is influenced by racial and ethnic background, socioeconomic status, and possibly by level of physical activity and dietary intake. The onset of menstruation is a very important part of a girl's sexual development.

The rising production of estrogens and progesterone during puberty cause the eventual development and release of ova (egg cells), which have been present since birth, from the ovarian follicles on a regular monthly cycle (approximately every 28 days). The increase in estrogen production also stimulates monthly proliferation and sloughing off of the endometrium (uterine lining) which results in menstruation. Although there have been cases of pregnancy in adolescent females who have never had a menstrual cycle, usually when menstruation begins there is still not sufficient estrogen or progesterone stimulation to cause an ova to mature and release. To be safe, young females should know that a female should be considered potentially fertile at the onset of menstruation and perhaps before.

Pregnancy is possible when an ovum (egg cell) is ripened and released from one of the ovaries. This happens once a month and is called ovulation. If a male sperm cell joins with the ovum, a process called fertilization, the fertilized egg can attach and grow on the uterine lining, at which point a pregnancy is established.

If an egg is not fertilized by a sperm, pregnancy does not occur and the egg dissolves. The endometrial lining of the uterus is no longer needed, so it breaks down and leaves the body. This menstrual fluid, made up of the blood-rich lining, comes out through the vagina in the process of menstruation. The menstrual cycle is controlled by hormones released by the hypothalamus, the pituitary gland, and the ovaries.

The menstrual cycle is divided into phases related to the changes that occur in the ovary (the follicular and luteal phases) and the changes that occur in the endometrium (the menstrual proliferative, and the secretory phases). Each of these phases is controlled



by a complex pattern of secretion of hormones: gonadotropin releasing hormone (GnRH) from the hypothalamus, follicle stimulating hormone (FSH) and luteinizing hormone (LH) from the pituitary, and estrogen and progesterone from the ovary.

A menstrual cycle is defined as the period of time from the beginning of one menstrual flow to the beginning of the next menstrual flow; the day bleeding starts is counted as the first day of a given cycle. The average length of the menstrual cycle is 28 days but typically can range from 21 to 35 days. It is normal for adolescents to have irregular cycles, including longer and shorter cycles. A period may be late due to emotional stress, major changes in diet, sickness, loss of sleep, great excitement, traveling, change in climate, pregnancy, or rarely, hormonal imbalance. It is important that women keep track of the day their menstrual bleeding starts by noting it on a calendar.

For all women, ovulation (release of ovum) occurs approximately 14 days (range of 12-17) before the beginning of the next menstrual cycle. The variation in the length of the average 28-day menstrual cycle is usually due to variation in time required for the ovum to mature, which takes place during the first half of the menstrual cycle. This timing is important to understanding fertility and contraception.

An ovum can be fertilized for up to 24 hours after release from the ovary. Sperm potentially can be fertile for up to 4 days in the female reproductive tract. The four days prior to ovulation and the day following is the most fertile period in a woman's cycle.

Some females may experience cramping, backaches, bloating and/or mood swings prior to or during menstruation. Anti-prostaglandins (such as ibuprofen) are a common course of treatment for some of these symptoms, but it is important for girls to discuss any medication with a health care practitioner. Some women experience relief from backache and cramping using hot water bottles or heating pads, and some cultures recommend drinking herbal teas as remedies for cramps or bloating.

During menstruation, women use either pads (sanitary napkins) or tampons to absorb menstrual flow. Both are made of various layers of absorbent material and should be changed several times a day for good hygiene and health. Toxic Shock Syndrome (TSS), a condition which may include fever, diffuse macular rash, orthostatic blood pressure changes, vomiting and/or diarrhea, muscle pain, dizziness, and disorientation was identified as a syndrome in 1978. Believed to be caused by a toxin produced by staphylococcus aureus bacteria, studies suggest that a clear association between the use of high absorbency tampons and an increased risk of TSS exists. Therefore, tampons should be changed every three or four hours to reduce the risk of TSS; women should not use tampons between periods or ones that are more absorbent than needed.

TSS can be life threatening, and prompt and accurate diagnosis is essential for treatment to be effective. Treatment involves antibiotics and fluid replacement. Discontinuing tampon use is effective in preventing recurrence of TSS. Federal government regulations for



tampon labeling took effect in 1990 and may be helpful in lowering the incidence of menstrual related TSS.

Male Sexual Development

In males the growth of the testes is the earliest sign of pubertal change, followed by the growth of pubic hair and enlargement of the penis, both in length and thickness. During puberty the skin of the scrotum gradually darkens and becomes less smooth. By mid or late puberty axillary and facial hair appear. Voice changes in males accompany a growth spurt around this time.

The first production of mature spermatozoa, or spermarche, usually occurs in mid-puberty at an average age of 13.5 to 14.5 years, along with first ejaculation. During this time, between 12.5 to 14.5 years, growth of the penis is rapid; erections occur more frequently in response to testosterone-influenced development of the corpora cavernosa.

Males as well as females are subject to highly individual biological clocks. The changes of puberty in the male usually begin between 10 and 12 years of age and end between the ages of 14 and 20. Therefore, some normal 13 or 14 year old boys appear to be grown men, while others of their equally normal classmates look like young boys. Growth spurts occur at age 14 in the average boy but can come earlier or later.

It is fairly common for young males to experience temporary breast enlargement during early puberty. This occurs in up to two-thirds of adolescents. Called gynecomastia, the condition is usually benign and self-limiting. Young men need reassurance that this condition has no effect on their masculinity and that it usually resolves within a year. It is important however for other causes of gynecomastia, such as chromosomal or hormonal disorders, gonadal tumors, or drug ingestion, to be ruled out.

Hygiene

Although a healthy, well-nourished, and exercised body is a great start toward a positive sense of self, it may not always be enough. Most adolescents, both male and female, want to feel attractive and accepted by others and have a healthy self-image. The quality of grooming and degree of cleanliness varies among peer groups. During adolescence, a teen's body undergoes changes, including the growth of hair in the armpits and in the pubic area, and the "turning on" of the sebaceous glands, which produce perspiration or "sweat." It becomes important to bathe or shower regularly and to use deodorant if necessary to help prevent body odor and embarrassment among peers. Odor is caused by the activity of normal skin bacteria which flourish in dark moist environments such as axillary and genital areas.

Habits of grooming that will last into adulthood are usually cultivated in adolescence and need to be encouraged. Hygiene consists of combing and keeping clean one's hair, and cleaning teeth, nails, and body, especially the armpits and the genital area. In addition, clothing should be kept clean and underwear and socks changed regularly. Adolescents should also be advised that practices such as piercing ears, the nose, and other body parts carries a risk of infection by various organisms, and therefore should be avoided. To prevent the transmission of HIV or other bloodborne diseases,



all piercing should be done with sterile, single-use needles, by a licensed health practitioner.

RECOMMENDATIONS FOR PHYSICAL EXAMINATIONS

The teen and his or her family should take responsibility for the following physical examinations. The role of the school health program is to support the adolescent through individual counseling and education.

Annual examination

All adolescents should have yearly appointments, with a physical examination if needed, so that a health care provider may screen for risk of reproductive health problems, treat problems if found to exist, and educate and counsel the adolescent on responsible and safe sexual behavior. All females should have a complete pelvic exam, including speculum and bimanual exam, by 18 years old, or before if sexually active or if the health provider determines there is a reproductive health problem.

Breast self examination

Female breast self-examination is a life protecting habit that should be learned and encouraged during the teen years as a method of early detection of breast cancer. Nearly 85% of the lumps found in breast tissue are discovered by women themselves. Women who learn and practice simple breast self-examination have a greater likelihood of detecting lumps at an early, more curable stage. While most lumps are not cancerous, especially in younger women, any lump that is found should be checked immediately by a health care provider.

Self examination for testicular cancer

According to the American Cancer Society, testicular cancer is one of the most common types of cancer in American men between the ages of 15 and 35, occurring in about 5000 men in the U. S. each year. With early detection, the survival rate of the most common form of the disease is almost 100%. Those with the best chance of survival are those whose cancer is discovered early.

Testicular self-examination is an important safeguard for health. Just as women are encouraged to perform regular breast examinations, it is important that men examine their testicles once a month, after a warm shower when the scrotum is relaxed, by gently rolling each testicle between the thumb and fingers of both hands. It is important to know the feel and shape of the testicles (like a hard-boiled egg with the shell removed). Any lumps or bumps (or it feels as if a piece of shell is stuck on the hard-boiled egg) should be brought to the attention of a health care provider immediately.

Genital self examination

A self-exam of the external genitals (vulva, scrotum, penis) familiarizes young men and women with what is "normal," and enables them to check for irritations, discolorations, swelling, bumps, or other skin lesions. School nurses may wish to recommend to students that they discuss such an examination with their health care practitioner.

DECISION MAKING REGARDING SEXUAL ACTIVITY

Family values, sociocultural background, developmental stage, self image, and other factors have a strong influence on young people's decisions about whether or when to engage in sexual activity.



Knowledge is a necessary condition for responsible decision making, but unfortunately knowledge alone is not sufficient. A large body of research indicates that knowledge about sex and sexuality neither changes the course of an individual's sexual development nor increases sexual activity. In order for young people to practice healthy behaviors, information must be accompanied by the development of communication skills and values clarification.

Learning skills in interpersonal communication, decision making, resisting peer pressure, and assertiveness enables young people to have satisfying relationships based on responsibility to themselves and others. Communication about sexual matters may be frightening. One may feel that being honest will hurt, embarrass, or threaten a partner, or that talking may ruin the experience. Adolescents may not be certain about what they want and may find it difficult to express their uncertainty.

For young people, not only are sexual feelings new and often confusing, but peer pressure and popular culture strongly influence decision making. Expressing themselves and learning to talk about sexual decisions more thoughtfully through role playing in the classroom, observation of role modeling by caring, responsible adults, or by taking quiet time with a partner will increase their comfort with communication about sex and help them avoid being pressured into sexual expression or behavior by anyone. For adolescents who make a decision to abstain or postpone sexual activity, the support of family, health professionals, and educators, is important to counteract peer pressure and other societal influences.

PREVENTION OF ADOLESCENT PREGNANCY AND STDS

In educating adolescents regarding decisions about sexual activity, health education professionals must pay attention to a variety of developmental and psychosocial issues. Use of contraceptives by adolescents is less influenced by education and information than by cognitive developmental stage, personal beliefs, lifestyle, socio-cultural background, and external support systems. Values involving choice of partner, peers or family, self image, and even pregnancy may have a powerful influence on decisions about contraceptive use. Recognition of emotional, cultural, psychological, or economic issues, in addition to information about the proper use of each method of contraception is critical to preventing adolescent pregnancy, STD and HIV infection.

If an adolescent makes a decision to become sexually active and to use contraceptives, she or he may request them from a health care provider, or may be told by a health care provider during the course of an appointment that contraceptives are available. Health professionals should consider the following in counseling adolescents about methods of contraception:

- When sexual intercourse occurs, any preventive method is better than none, but only the latex condom reduces the risk of HIV and STD infections, as well as pregnancy.



- The best contraceptive methods are those that the partners will use correctly and consistently.
- Education about each contraceptive method should emphasize the use of the latex condom as an effective prevention for HIV and STD infections as well as pregnancy, and highlight those methods under consideration, including risk factors and success rates.
- Techniques for obtaining and using contraceptives (such as how to maintain a daily schedule for taking oral contraceptives or how to obtain condoms and use them correctly and consistently) are key.
- Not all methods that prevent pregnancy will prevent sexually transmitted infections.
- STDs and HIV transmission can only be prevented by using protection during sexual activity or intimate contact.
- These may be contraindications to the use of particular contraceptive methods.
- The effectiveness of any contraceptive method depends on several factors, including consistency of use, length of time of use, and physiological and anatomic characteristics of the user.

Contraceptive methods may include:

- Abstinence from intercourse
- Consistent and proper use of latex condoms
- Consistent and proper use of oral contraceptives ("the pill" or "birth control")
- Hormonal Injections (Depo-Provera)
- Subdermal Implants (Norplant)
- Spermicidal Methods (foam, vaginal suppositories with spermicidal chemicals, contraceptive sponge, and VCF (vaginal contraceptive film))
- Withdrawal (removal of penis from vagina before ejaculation begins)
- Fertility Awareness and Natural Family Planning (abstaining from intercourse during the period of fertility)

ADOLESCENT PREGNANCY

Recent annual statistics in Massachusetts (1993) indicate that adolescent births is a major issue:

- One out of thirty girls between the ages of 15 and 19 gives birth each year.



- More than 6,600 births to teens occurred in Massachusetts; 137 births occurred to teens less than 15 years old.
- Thirty percent of teenage girls do not register for prenatal care during the first trimester.

Pregnancy Issues

Adolescents who think that they may be pregnant should be referred immediately to their primary health care provider for confidential pregnancy testing, diagnosis, and counseling. In Massachusetts, M.G.L. c. 112, s. 12F creates a category of “emancipated minors” who are given legal authority to make decisions about their own medical diagnosis and treatment. For example, minors who believe themselves to have been exposed to a dangerous disease, such as a sexually transmitted disease, or a minor who believes herself to be pregnant may legally consent to diagnosis and treatment without parental involvement. In fact, the statute requires that the information be held confidential unless the life or limb of the minor is endangered. (See also Chapter 6 for a discussion of the confidentiality of school health records.)

Informing a teenager that she is pregnant (or that a young man’s partner is pregnant) usually precipitates a personal and family crisis. This crisis situation for both male and female adolescents requires the assessment of medical, emotional, psychological, economic, legal, and confidentiality issues within the context of the psychosocial stage of development. Younger adolescents often lack the cognitive and emotional maturity to cope with the many ramifications of pregnancy and need substantial support from many sources.

The pregnant adolescent is faced with making one of three decisions regarding her pregnancy. She may choose to: 1) continue the pregnancy, initiate prenatal care, and assume the parenting role (alone or with her partner); 2) she may decide to continue the pregnancy, initiate prenatal care, and make plans for the baby’s adoption; or 3) she may choose to terminate the pregnancy. The adolescent’s decision is influenced by a combination of economic, situational, moral, cultural, and/or religious beliefs. She is likely to be strongly influenced by friends, family, or the father. For many adolescents (both male and female) pregnancy is a traumatic experience. Because a pregnant adolescent may be strongly influenced by peers and her partner, she should be encouraged to discuss these various issues with parents or another trusted adult. An informed decision made by an adolescent with sound adult advice is more likely to result in meeting the long-term needs and promoting the future well-being of not only the pregnant adolescent, but her partner and their child as well.

Prenatal Care and Assumption of the Parenting Role

Initiating prenatal care in the first trimester of pregnancy statistically improves pregnancy outcomes. Yet, typically across the nation, up to 70 percent of adolescents do not seek prenatal care until the second trimester (fourth to sixth month) of pregnancy. Early and comprehensive prenatal care provides several benefits and meets essential needs of both the mother and the fetus:



- confirmation of pregnancy and gestational age
- social service counseling about pregnancy options, future plans, and psychosocial risk factors
- nutrition counseling and initiation of prenatal vitamins, especially iron and folic acid supplements
- referral for assistance from such programs as Medicaid and WIC
- early detection and treatment of sexually transmitted diseases (STDs) and other infections, and counseling on prevention of STDs
- education about the risks of tobacco, alcohol, and other substance use, especially during pregnancy
- baseline weight and blood pressure measurement
- identification of risk factors from medical history and physical examination and initiation of appropriate and timely interventions

Counseling should be introduced early in prenatal care regarding pregnancy prevention so that adolescents, who are at risk for short-spaced repeat pregnancy, have a chance to learn about and plan for future steps to prevent another pregnancy.

Adolescents, especially young adolescents, are at risk for developing medical problems during pregnancy, which require special interventions for prevention and treatment. Some examples include syphilis, underweight, blood group incompatibilities, and urinary tract infections.

Prenatal care for adolescents who plan to become parents should include preparation for childbirth, infant care and nutrition, and parenting. In addition, social service support is essential for assuring return to school, work, or vocational training after delivery.

Adoption

The rates for placement for adoption have declined significantly in the United States over the past 40 years. For adolescents, the decline in adoption rates is particularly notable, from an estimated 80 percent in the 1950s to 4 percent in the 1980s. Availability of contraception, lack of information about adoption, a greater acceptance of adolescent parenthood and the ability to obtain legal and safe abortions have all influenced this trend.

Adoptions are handled through both public and private agencies. Birth parent(s) relinquish the baby to the agency for placement with a family selected by the agency. Referral to a reputable social service agency provides trained counselors who can help support the decision making process both during the planning to place a child for adoption as well as after the child has been placed. An adoption may also be completed independently (privately) when birth parents go through the legal steps to place their baby directly with the adoptive parents. Many adoptions are arranged privately



through attorneys, with contacts made through friends or health care providers. A “closed” adoption occurs when the birth parents do not know the names, addresses, or any identifying characteristics of the adoptive parents nor does the adoptive family know anything specific about the birth parent(s). In an “open” adoption, birth parent(s) and adoptive parents may meet each other and maintain contact after the adoption.

Terminating a Pregnancy

Many teens lack information about what terminating a pregnancy by having an abortion entails. In Massachusetts, abortion is legal until the twenty-fourth week of gestation; it is permitted later only if the pregnancy threatens the woman’s life or health.

While current Massachusetts law (M.G.L. c. 214, s. 1B) regarding confidentiality and parent notification permits adolescents to obtain information, treatment, and diagnosis for family planning, pregnancy, and STDs without permission from their parents, the state requires two-parent consent for minors seeking abortion. A young woman under the age of 18 who wishes to have an abortion in Massachusetts is required by law to obtain the consent of both her parents (unless one parent is unavailable) within a “reasonable” period of time or in a “reasonable” manner. If parents are divorced and do not have joint legal custody, the consent of the parent with sole legal custody is sufficient.

If an adolescent cannot obtain parental consent or does not want to request such consent, she may seek authorization for an abortion from a Superior Court judge. The law requires the judge to grant the minor’s petition for an abortion if the judge determines the adolescent is mature and capable of giving “informed consent.” If the judge determines that the adolescent is immature, the judge must decide whether or not an abortion is in her best interest. Of the more than 10,000 Massachusetts minors seeking judicial hearings since the law went into effect in April, 1981, two have ultimately failed to receive judicial consent.

Attorneys in Massachusetts, through the Committee for Public Counsel and the Women’s Bar Association, offer their services to minors seeking judicial consent. An attorney will arrange the court appointment and accompany the minor to court free of charge. A young woman who requires judicial consent for an abortion can obtain a lawyer through Planned Parenthood’s Counseling and Referral Hotline (See Resources at the end of the chapter).

Impact of Pregnancy and Parenthood on Adolescents

Research has shown that early motherhood has potentially damaging effects on the educational, vocational, psychosocial, marital, and subsequent childbearing future of the adolescent female. Pregnancy is one of the most common reasons girls cite for failing to complete high school. Closely related to a disruption in education is a corresponding decrease in employment opportunities for adolescent mothers. Young mothers without support may also be at high risk for a host of mental health problems including depression, anxiety, psychosomatic complaints, substance use and abuse, child abuse, and family disruption.



Although some adolescent fathers may be absent from the household of their partner and child, many remain involved. Even though they may not provide a significant source of child care or financial assistance, teen fathers often report strong emotional ties to the mother and child and concern for their welfare. Many young fathers report difficulty in dealing with the anger and demands of their partner's families. A young father may question the paternity of the child he has been told is his, which may be an expression of his ambivalence about accepting a responsibility he feels ill equipped to meet. A minority of fathers do not admit paternity.

Parenthood during adolescence is associated with a disruption of social and emotional growth in all but the most exceptional cases. At a time in their lives when independence, identity formation, development of future plans, and establishment of social relationships are naturally their focus, competing demands of parenthood create an additional set of stressors. The adolescent parent's potential need for professional counseling should not be overlooked. Counseling services need to be consistent, non-threatening, and directed toward achieving realistic goals. The adolescent should be encouraged to express all feelings, positive and negative, about pregnancy and parenthood. It can be helpful to write them down.

Certain factors are overlooked by pregnant teens who have not received comprehensive pregnancy counseling. Children born to adolescent parents may be at risk of exposure to physical, psychological, social, and economic barriers. If a pregnant teen does not receive adequate prenatal care, the child may suffer from low birth weight or developmental delays. A child's academic performance may suffer as a result of the interruption of the mother's education. Single parent households may offer fewer opportunities to provide financial support for a child.

OTHER SEXUALITY ISSUES

Cultural Diversity

Massachusetts has become increasingly multicultural. School systems are educating students from all over the world. Just as age determines how best to communicate with children about sexuality, ethnicity and cultural experience equally influence how young people think about sexual development and experience. Feelings and behaviors related to sexuality are part of a larger system of culture. (See Chapter 16 for a discussion of immigrant and refugee health care issues.) Some important factors to consider are the degree of acculturation of the student's family and the student him or herself.

Degree of Acculturation of the Student's Family

Acculturation means adapting to and incorporating new cultural values after immigration. Families who have been in this country a short time, or those who live and work in relatively insulated communities, are more likely to think about sexuality from the perspective of their country of origin. For instance, Massachusetts is now home to many families emigrating from other countries where young girls are expected to refrain from any sexual behavior before marriage. If they do not adhere to this cultural value, they may believe they will bring shame on themselves and their families. Teaching about contraception or STDs may be considered inappro-



priate by parents who believe that their children will become sexually active as a result of education, even though research typically shows no increase and even some decrease in sexual activity as a result of education.

Degree of Acculturation of the Student

Parents and children adopt American values and behaviors at different rates. This is especially true for adolescents. When talking to young people about issues related to sexuality, it is important to consider the child's values in relation to family values and customs or acculturation to the dominant culture in the United States. A health educator can be instrumental in assisting the child in reconciling the two sets of values.

A study by the Boston University School of Public Health demonstrated that students born outside the continental U.S. may overestimate the levels of sexual activity of their American-born peers. This misperception may have implications for foreign-born students and their belief that sexual activity is desirable for group acceptance.

Sexual Orientation

Sexual orientation is defined as the physical and emotional attraction one feels to members of the same or opposite sex, or both. Heterosexual means being attracted to members of the opposite sex. Homosexual means being attracted to persons of the same sex. Bisexual means being attracted to members of both sexes. The terms preferred by many homosexuals today are lesbian (women), gay (men), or bisexual (either).

Coping with discrimination and stereotypes based on sexual orientation may be difficult for gay, lesbian, and bisexual youth. They are surrounded by images, expectations, and assumptions about the "normalcy" of heterosexuality versus the "unacceptability" of homosexuality. Bias comes in the form of name calling, taunting, hatred, stigmatizing, and physical violence ("gay bashing"). Homophobic behavior of others may also be internalized by gay/lesbian/bisexual youth in the form of self-hatred. Gay teenagers are two to three times more likely to attempt suicide than their heterosexual peers. Some local school districts have developed programs which foster appreciation for diversity to counter the damaging effects of homophobia. In 1993, the Massachusetts legislature enacted law (Amendment to Chapter 622) that protects gay pupils from discrimination in school based on sexual orientation.

In a booklet written for the Federation of Parents and Friends of Lesbians and Gays (FLAG), scientists and researchers answer questions most commonly asked about gay and lesbian youth. A majority of the scientists surveyed agree that:

- The exact causes of heterosexuality and homosexuality are unknown.
- Homosexuality and heterosexuality are likely to be the result of an interaction of genetic, hormonal, and environmental factors.
- Psychological and social influences alone cannot cause homosexuality.



- A biological (genetic, hormonal, neurological) predisposition toward a homosexual, bisexual, or heterosexual orientation is present at birth.
- None of the contributing factors alone can cause homosexuality.
- Sexual orientation cannot be changed through therapy.

Sexual experimentation may occur during adolescence and does not define or predict one's sexual orientation. Whether adolescent sexual behavior represents sexual orientation or sexual experimentation, teens often need emotional support during this time of blossoming sexual desires. Social pressure associated with sexual orientation choices may have devastating effects on teens. It has been estimated that 30% of teen suicides result from worry and depression about sexual identity. Depression can also lead to acting-out behaviors, substance abuse, isolation, and poor school performance.

Teens require an atmosphere of trust and acceptance in order to discuss sensitive issues related to sexuality. School professionals and health care providers should be aware of student concerns about sexuality and provide information and resources in a non-judgmental way.

Sexual Abuse and Sexual Assault

Sexual abuse means engaging an individual in sexual activities that violate the law. Sexual abuse can include emotional and verbal abuse. School professionals are mandated reporters of abuse as well as neglect and are required by law to report it to the Department of Social Services (see the section on Child Abuse in Chapter 13).

Sexual assault is violence and violation acted out by sexual means. Rape and other sexual assaults are serious violent crimes that have devastating, long-term effects on the lives and health of survivors. It is both a personal crisis and a social problem. Therefore, it is important to address both the need for sensitive, timely and appropriate services for survivors and their families and preventive education and community awareness about the realities of sexual assault (See also Chapters 11 and 13 for a more detailed discussion of these issues).

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RESOURCES

Organizations

Advocates for Youth
(formerly Center for Population Options)
1025 Vermont Avenue NW
Washington, DC 20005
(202) 347-5700

Provides information, education and advocacy to youth serving agencies and professionals, policy-makers, and the media.

EPA (Education Programs Associates)
1 West Campbell, Suite 40
Campbell, CA 95008
(408) 374-3720

Provides low-literacy and multi-cultural family planning and patient education materials.

ETR Associates
PO Box 1830
Santa Cruz, CA 95061
(408) 438-4080

Publishes and distributes a variety of materials covering all areas of health education.



CHAPTER 12

Alan Guttmacher Institute
120 Wall Street, 21st Floor
New York, New York 10005
(212) 248-1111

Publishes and distributes research and policy analysis
publications on reproductive health.

Harvard Community Health Plan Foundation
185 Dartmouth Street
Boston, MA 02116-3502
(617) 859-5036

Disseminates the TLC (Talk Listen Care) Kit and
FIRST AIDS KIT

Massachusetts Department of Education
Learning Support Services
350 Main Street
Malden, MA 02148
(617) 388-3300, ext. 386

Massachusetts Department of Public Health
Bureau of Family and Community Health
150 Tremont Street
Boston, MA 02111
School Health Unit (617) 727-0941
Adolescent Health Program (617) 727-3779
Family Planning Program (617) 727-5121

Planned Parenthood League of Massachusetts
99 Bishop Allen Drive
Cambridge, MA 02139
(617) 492-0518

Provides a library and a training center.

Planned Parenthood League of Central Massachusetts
631 Lincoln Street
Worcester, MA 01605
(508) 854-3300

Provides a library and an education department.

SIECUS (Sex Information and Education Council of the United
States)
Publication Department
130 West 42nd Street, Suite 350
New York, New York 10036
(212) 819-9770

Provides a library, publications department, and informa-
tion services including database searches and technical
assistance.

Referrals for Adolescents

Planned Parenthood League of Massachusetts
(800) 682-9218 (counseling and referral hot line)



Teen Yellow Pages: A Resource Guide for Teenagers
Youth Involvement Committee
United Way of Massachusetts
(617) 422-6621

Youth Only HOTLINE
AIDS Action Committee
131 Clarendon Street
Boston, MA 02116
(800) 788-1234

Resources for Adolescents

For Middle School Students

Madaras, Lynda. (1988). *The "What's Happening to My Body?" Book (for girls)*. New Market Press.

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For Adolescents (Aged 14 years and older)

Bell, R., et al. (1988). *Changing Bodies, Changing Lives*. New York: Random House.

Boston Women's Health Book Collective (1992). *The New Our Bodies Ourselves*. New York: Simon & Schuster.

Masland, R. (1988). *What Teenagers Want to Know About Sex: Questions and Answers*. Boston: Little, Brown.

Resources for Gay and Lesbian Youth

BAGLY (Boston Alliance of Gay and Lesbian Youth)
PO Box 814
Boston, MA 02103
(800) 422-2459

Gay and Lesbian Helpline
(617) 267-9001

Massachusetts Department of Education
Learning Support Services
350 Main Street
Malden, MA 02148
(617) 388-3300, ext. 386

Safe Schools Program for Gay and Lesbian Students: offers trainings on gay and lesbian issues for faculty, students, administrators, parents, and community members, as well as technical assistance in establishing gay/straight alliances. It also has a mini-grant program.

Men of Color Against AIDS
Fenway Community Health Center
7 Haviland Street
Boston, MA 02115
(617) 267-0900

FLAG (Parents and Families of Lesbian and Gay Youth)
1012 14th Street, N.W., Suite 700
Washington, DC 20038
(202) 638-4200



CHAPTER 12

Curricula

Abstinence-only curricula

Postponing Sexual Involvement

Emory/Grady Teen Services Program
Grady Memorial Hospital
80 Butler Street
Atlanta, GA 30335
(404) 616-3513

Into Adolescence

ETR Associates
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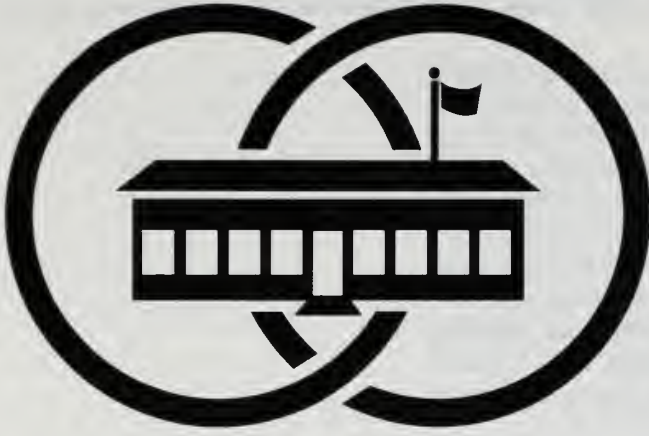
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Chapter 13

INJURY AND VIOLENCE PREVENTION

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Injuries are an important concern for school personnel. Children and adolescents are more at risk of death or disability from an injury than from all other causes combined. The risk for receiving any specific injury changes with the age of a child. For example, an adolescent is most at risk for receiving an injury in a motor vehicle crash, whereas a younger child is more vulnerable to sustaining an injury in a fall during play (in the playground, off a bicycle, during athletic activities, etc.). Males are at higher risk for almost all injuries, and African-Americans are also at higher risk for most injuries. The single exception is adolescent suicide, in which white males are at highest risk.

Injury includes, but is not limited to, motor vehicle crashes, homicides, assaults, rapes, suicides and suicide attempts, child abuse, burns, poisonings, drownings, and pedestrian and bicycle crashes. The National Committee for Injury Prevention and Control defines injury as “any unintentional or intentional damage to the body resulting from acute exposure to thermal, mechanical, electrical, or chemical energy or from the absence of such essentials as heat or oxygen.”

This chapter discusses issues involved in teaching safety and violence prevention, and focuses on different types of interpersonal violence and unintentional injuries. Each section contains information on the prevalence of the problem followed by suggestions for prevention and intervention strategies that school staff can undertake.

INJURIES ARE NO ACCIDENT

Injury professionals are trying to remove the word *accident* from their vocabulary, because it implies that an event happened randomly, by chance — because someone was careless or was in the wrong place at the wrong time. Saying that an injury occurred “accidentally” gives a false impression that there was nothing that could have been done to prevent it. Most injuries are predictable and preventable. For example, if a child falls off the monkey bars and breaks his arm, he may have done so because the bars were too far apart for a child his age and the school did not restrict usage for children under 6 years old. He might not have broken his arm if he had fallen on an adequate, impact-absorbing surface instead of asphalt or if established rules on the playground were consistently enforced.

Injuries result from the interaction of a host, an agent, and the environment. For example, an alcohol-impaired adolescent (host) with a weapon (agent) at an unsupervised party (environment) can result in violence. Altering one or more components of this equation can reduce the risk of injury. We cannot prevent all injuries, but the study of injury control has revealed ways to reduce their number and severity. Childproof caps, safety belts, child-resistant lighters, child safety seats, smoke detectors, bicycle helmets, water safety instruction, rules for safe tackling in football, weapons policies, and sexual harassment awareness training are examples of effective tools in lessening injury's toll. Because youth are both victims and perpetrators of violence, school-based violence prevention programs (including conflict resolution techniques and peer mediation, the enactment and enforcement of regulations, and changes in the environment) can provide positive alternatives to prevent and relieve conflict.



Injury and violence prevention is most effective when it follows a three-pronged approach: *education*, supplemented by evaluating the safety of the *environment* and equipment, and developing and *enforcing* safety laws, guidelines, and recommendations. Understanding the scope of injury and violence, as well as successful prevention and intervention strategies, is essential in a school's effort to keep students safe before, during, and after school. Successful injury and violence prevention also involves parents, students, and others in the community.

TEACHING ABOUT SAFETY AND VIOLENCE PREVENTION

In many respects, teaching children and adolescents about safety and violence prevention is no different from teaching them about anything else. One must take into account the students' ages and developmental levels as well as their ability to comprehend various material and then adjust the curriculum and one's expectations accordingly. In injury prevention, it is also important to target efforts in areas in which the age group being taught is most at risk. Comprehensive and topic-specific curricula exist for many safety issues. (See the **Resources** at the end of this chapter and in Chapter 3.)

Kindergarten through Grade 6

Issues of most concern for children in grades K–6 are traffic safety, bicycle safety, water safety, playground safety, fire safety, and personal safety. These are the years to instill and reinforce good safety habits, before the risk-taking of adolescence. Children are eager to learn and seek approval from adults. Teachers have ample opportunity to teach and practice safety behaviors in school that may be continued outside school and have an impact on other family members.

Poster drawing contests and popular figures can be used to reinforce the message of safety. Guest speakers who are powerful role models for children can be another effective strategy (e.g., police officers and fire prevention officers). Even though teaching efforts should focus on areas in which students are at risk, it is still a good idea to begin to bring up topics that will affect them later in life. It is not too early to talk about violence prevention in the context of respecting others and managing one's feelings. Adolescents may be the age group most at risk for motor vehicle crashes. Therefore, discussing the importance of safety belts with younger children will both instill lifesaving habits while they're young and help them to remember later on when they become adolescents.

Middle School

Issues of concern for middle-school-aged children are sports injury, bicycle safety, and aggression. The years between ages 10 and 15 are a challenging time and are especially important for prevention initiatives. Younger adolescents are still at a developmental stage at which patterns of thought and behavior regarding violence and other injuries are changeable. Preteens want to be treated as adults, but they are still somewhat immature and self-conscious.

Students at this age are better able to learn facts and figures than younger students but have a limited interest in this approach to safety education. Generally they will be more engaged in safety



lessons in which they are challenged to solve problems or assume a level of responsibility. Adventure-based curricula provide appropriate decision-making and cooperative skills to assess risks.

Students in this age group should be provided with opportunities to be good role models for younger children. The school might offer a babysitting readiness class in which preadolescents are taught safety lessons in the context of being a responsible babysitter to younger children. They also can be taught tools to help them master their environment, such as cardiopulmonary resuscitation (CPR) certification, and leadership skills such as developing peer safety programs. Guest speakers they respect (older students, athletes, emergency medical technicians, nurses) can speak with them about safety issues about which they will be making choices: violence prevention, car safety, or wearing a helmet to ride a bike, skateboard, or rollerblade.

Adolescents

Issues of most concern for adolescents are occupational injuries, sports, motor vehicles (high speeds and alcohol), violence within relationships, homicide, and suicide. The life stage of adolescence is fertile ground for risk taking. In their transition to adulthood, teens face many important developmental tasks: gaining autonomy and mastery, seeking intimacy, and separating from parents and family. Risk taking is perceived as one way to pursue these tasks. Adolescents are highly vulnerable to serious injury and death, particularly from motor vehicle crashes, homicide, and suicide. The combination of the adolescent feeling invulnerable and not necessarily trusting what adults have to say can make injury prevention instruction a challenge.

Adolescents are more likely to adopt positive health behaviors if they believe they are susceptible to specific threats that have serious consequences. They have to believe it is within their control to take action, and they must believe the action is socially acceptable. They must recognize the pressures that lead them toward risky behaviors while gaining the skills and motivation necessary to resist those risks.

The following have been found to be effective in working with adolescents:

- Provide information on making safer choices. Focus on the topics for which they are most at risk, and avoid using fear tactics.
- Talk *with* adolescents, not at them or over them. Telling young adults not to drink and drive will be ineffective if there is no attempt at discussing the pressures they face as they make these choices.
- Do not make them feel embarrassed for what they do not know.
- Use examples, stories, and guest speakers rather than statistics.
- Emphasize that knowledge is power, that choosing safety should make them feel stronger and more in control.



- Reinforce positive choices adolescents say they have made.
- Provide written materials to supplement verbal messages. Keep materials simple and culturally appropriate.
- Be a role model. An instructor will have little credibility in safety education if he or she is observed cycling without a helmet.
- Offer opportunities for adolescents to develop leadership skills to be used among their peers and in activities with younger children.

INTERPERSONAL VIOLENCE

Violence, a major public health problem, disproportionately affects youth and minorities. Adolescents, in particular, confront violence and abuse in many environments traditionally viewed as safe havens: home, among peers, school, and the community. Violence at school is linked to violence in families and in the community. It is also closely related to alcohol and other drug abuse (see Chapter 14). The statistics are startling:

- Between 1987 and 1991, more than 1,200 Massachusetts residents lost their lives from interpersonal violence.
- Youth 15-24 years old had a homicide rate twice the overall Massachusetts rate; the rate for youth more than doubled during 1987-1991.
- In Massachusetts, homicide is the leading cause of death for African-American male youth who account for more than half of youth homicide.
- Nationally, one-fifth to one-third of all women are physically abused during their lifetime.
- Nationally, an estimated 1.6 million children are seriously injured or impaired each year as a result of abuse or neglect.

The 1993 Massachusetts Youth Risk Behavior Survey reported the following:

- 20% of students surveyed reported having carried a weapon of some kind in the last 30 days; 10% of students reported having carried a weapon *on school property* in the last 30 days.
- 5% reported not going to school one or more times in the last month because they did not feel safe at school or on the way to school.
- 9% reported being threatened or injured with a weapon on school property in the last year.



- Nearly 28% reported having their personal property stolen or deliberately damaged on school property in the last 12 months.
- About 41% said they had been in a physical fight in the last year.
- 15% said they were in a physical fight on school property in the last year.

The causes of interpersonal violence are many and complex: access to weapons, substance abuse, drug trafficking, lack of self-esteem or sense of community, lack of income, a culture that glorifies violence, childhood experiences that cause someone to choose violent behaviors, and lack of information in the community about violence prevention and control.

Aside from their own homes, school is usually where youth spend the majority of their time. School not only contributes to one's sense of self but provides individuals with valuable information about themselves in relation to others. Since the school is a vital socialization agent, the climate of the school is important. The *climate* includes everything from the safety of the physical plant to the degree of mutual respect accorded students, teachers, and other school personnel in their dealings with one another.

Multiple strategies are required for regulating the school climate. Some school systems have instituted stricter dress codes, no-weapons policies, metal detectors, or requirements for see-through book bags. Changing the school environment to make it more responsive to the needs of all students can be as effective in preventing violence as installing metal detectors. Changing the school climate involves restructuring schools by transforming rigid and outdated school structures into ways that respond to the academic, physical, social, and emotional needs of all students. The Massachusetts Department of Education's (MDOE) Instruction and Curriculum and Learning Support Services clusters coordinate that department's activities on restructuring schools for student success, including those aspects of school that relate to comprehensive health education. Strategies for restructuring include the following:

- Review policies and procedures (including student discipline codes) to enhance student achievement and reduce student dropouts and academic failure.
- Create smaller teaching and organizational units within the school.
- Use innovative instructional strategies.
- Support teachers with increased professional development opportunities.
- Collaborate with outside agencies to provide a broad spectrum of services to the school community.



consistent district-wide policy that describes expectations for student conduct and appropriate school responses. Successful school-based violence prevention programs have the following characteristics:

- Consistent, clear, and repeated reminders about expectations regarding student conduct.
- Positive reinforcement of the use of negotiation and conflict resolution skills in all school activities, including extracurricular activities such as competitive sports.
- A school administration that is committed to do as much as possible to maintain a safe learning environment.
- A clear message that violence and harassment are antisocial behaviors that will not be tolerated in school, in athletic activities, at home, or anywhere.
- Barriers eliminated between different groups, and communication improved among youth, teachers, administrators, and parents.
- Training provided for students and faculty in violence prevention skills, communication, conflict resolution, negotiation, and reconciliation.
- Peer-led mediation and violence prevention education that is integrated into comprehensive health education of all students.
- Trained staff provided to work with students and adults who have problems with aggression and violence.
- Respect for the opinions of youth regarding why violence exists, why they feel the need to protect themselves, what they believe schools can do to promote safe learning environments, and what environmental changes would promote the psychological health of the entire school community.
- Ways found to improve the school climate through changes in structure, staffing patterns and relationships, policies, curriculum content, student involvement in change, and other similar avenues.
- Outreach to media and others to involve community groups and agencies (including law enforcement, the courts, social services, health and mental health providers, and civic and religious organizations) in helping to address the problem of violence in the community as well as the schools.
- Parent involvement with students and staff to improve communication and mutual support.
- Access for all to recreational activities that discourage aggressive behaviors and help develop positive relationships with others.
- Access to positive role models, mentors, advisers, or programs that pair caring adults with high-risk students. 1/95



- Development of policies and procedures for responding appropriately to violence or threats of violence in or on school property.

Limit-Setting Measures

Each school is required by law to file a code of conduct with the MDOE in order for school rules to be enforceable (M.G.L. c. 71, s. 37H). The code should stress the safety of all persons and the prevention of violence in the school, and address discipline, the possession of weapons, and the protection of students from harassment and the threat of violence. Those developing the conduct code should recognize that student fear of intimidation may lead to self-protective behaviors such as weapon carrying that can put them at further risk. (Please note: Exhibit 13-1 Policy is a sample policy regarding weapons in the school and Exhibit 13-2 Policy is a sample policy on sexual harassment in the school. Both may be adapted or duplicated for use by your school.)

School policies to prevent violence should include:

- A range of disciplinary responses to rule violations, from counseling to expulsion in incremental steps.
- Environmental safety measures, such as adequate lighting and security measures, which may be developed in collaboration with the local police and youth-serving agencies.
- Official school committee-approved policies on concealment, amnesty, searches, and anonymous tips that are distributed to the community and publicized through local media — policies which include input from students, parents, the legal and public safety community, and school staff.
- A form for students and parents to sign indicating that they have been informed about the school's policies regarding weapons and violent behaviors.

Types of Interpersonal Violence

This section contains descriptions of the most common forms of interpersonal violence with suggestions for what school staff can do as prevention and intervention strategies. It should be noted that various types of violence often overlap. (Please note: Suicide is self-inflicted intentional injury and is covered in Chapter 11.) Exhibit 13-1 through Exhibit 13-5 Fact Sheets cover different types of interpersonal violence; the fact sheets are meant to be duplicated for use by your school.

Child Abuse and Neglect

Child abuse and neglect encompasses the following, as defined by the Massachusetts Department of Social Services (DSS) regulations 110 CMR 4.00:

Abuse: The nonaccidental commission of any act by a caretaker that causes or creates a substantial risk of harm or threat of harm to a child's well-being or the commission of a sex offense against a child as defined by the criminal laws of the Commonwealth.



Neglect: Failure by a caretaker, either deliberately or through negligence, to take actions necessary to provide a child with minimally adequate food, clothing, shelter, medical care, supervision, or other essential care or physical dependence of a child upon an addictive drug at birth.

Serious physical injury: Any nontrivial injury, death, malnutrition, or failure to thrive.

Serious emotional injury: An extreme emotional condition such as a severe state of anxiety, depression, or withdrawal.

Sexual abuse: Exploitation of a child for the sexual pleasure of the adult (i.e., rape, incest, fondling of private areas, exhibitionism, photographing for pornography).

M.G.L. c. 119, s. 51A mandates the Department of Social Services (DSS) to receive reports of possible child abuse and neglect, and also lists **mandated** reporters and defines their responsibilities. The following school staff are **mandated** reporters: physicians, dentists, nurses, public or private school teachers, educational administrators, psychologists, guidance or family counselors, and social workers.

The statute requires that mandated reporters contact DSS and file a “51A” (the form that is named for the legislation, section 51A) when they have reasonable cause to suspect that a child under the age of 18 is suffering from physical or sexual abuse or neglect. In cases of physical abuse, prompt reporting is important because physical signs of abuse are helpful in corroborating facts. In cases where there is reason to suspect that allowing the child to go home would put him or her at risk for further abuse, DSS, when presented with evidence, may choose to file an emergency 51A form.

Each area of the Commonwealth has local offices to which all questions should be referred. The local DSS office can provide more information about what constitutes abuse and/or neglect, information as to how and where to report, assistance with individual situations, and educational programs to train staff.

Each school system should develop its own procedures for reporting child abuse and neglect. (See Exhibit 13-3 Policy for a sample staff procedures document.)

What Schools Can Do

- Provide training about the school system’s child abuse and neglect reporting protocol.
- Provide a workshop on the signs and symptoms of abuse and neglect.
- Provide a team of psychologists/social workers/nurses/teachers/administrators that responds to individual situations of suspected abuse and neglect.



- In order to encourage faculty and staff confidence about reporting abuse, counselors should be available to hear anonymous cases described in order to find ways for the child to be seen by the counselor or nurse in a confidential, safe, and sensitive manner.
- Educate faculty and staff about how to respond to children who disclose they have been abused, including how to create a school climate that supports such children.
- Help staff and parents learn how to introduce attitudes, information, and skills to help children avoid becoming victims of abuse and neglect.

Exhibit 13-1 Fact Sheet provides information on child abuse and neglect.

Domestic Violence

Domestic violence affects all members of a family, and may take many forms including physical and sexual violence (including rape and traumatic injuries during pregnancy), forced isolation, belittling verbal abuse, threats, intimidation, and the restriction of access to money, transportation, and other resources. Domestic violence is experienced in families of all socioeconomic groups, educational levels, ethnic or religious groups, or sexual orientation.

Interviews with children from homes in which domestic violence has occurred show that they are almost always aware of the violence and respond in a variety of ways. Many develop behavioral problems, either acting out aggressively or internalizing their distress in depression, withdrawal, eating disorders, or substance abuse. Often children who witness violence develop stress-related illnesses or sleeping disturbances. Some suffer from inadequate health care because of the abuse. Domestic violence may interrupt or delay children's emotional and cognitive development and affect school performance. Some children may be at high risk of injury, kidnapping, or murder.

What Schools Can Do

- Educate school personnel about domestic violence.
- Train nurses and guidance staff to identify and assist children living with domestic violence; training should include risk assessment and guidelines for DSS reporting of domestic violence.
- Develop a policy for protecting the safety of families experiencing or fleeing domestic violence, and support students living in shelters.
- Offer developmentally appropriate workshops or courses to students, in collaboration with a local battered women's program.
- Organize a peer education and support program which trains youth to educate classmates about gender roles, respectful relationships, and nonviolent conflict resolution.



- Inform parents, students, and staff about the warning signs of domestic violence and community resources for battered women and their children.

Exhibit 13-2 Fact Sheet provides information on domestic violence.

Youth Violence

Violence may occur both in school and outside of school.

Manifestations may range from fistfights and escalation of verbal threats to physical conflict and gang fighting, resulting in severe injuries or death. A major public health problem, youth violence affects students in urban, suburban and rural areas.

The threat of violence is a daily reality for many teens. The 1993 Youth Risk Behavior Survey conducted by MDOE found that two-fifths of Massachusetts high school students sampled reported being in a physical fight in the past year. Over 20% reported carrying a weapon of some kind within the past 30 days; nearly 5% of males reported carrying a gun.

Girls are involved as well as boys and can participate in bullying, fistfighting, hair pulling, name calling, and ganging up on students who are perceived as different because of their appearance, gender, behavior, or perceived sexual orientation.

Violence is a learned behavior; values, behaviors, and interpersonal skills developed in the early years can be critical in affecting behavior in later years. School and community-based activities that promote nonviolent values and teach nonviolent alternatives to resolve conflict are important throughout a child and adolescent's development.

What Schools Can Do

- Provide school-wide training for everyone in violence prevention and conflict resolution.
- Implement comprehensive, age-appropriate curricula on self-esteem improvement and violence prevention, including issues of racism, sexism, and homophobia.
- Create peer leadership and conflict resolution mediation programs in high schools.
- Develop a violence prevention plan that includes input from staff, parents, and students.
- Participate in community-based violence prevention coalitions.
- Provide counseling and other support services to students at risk of being victims, witnesses, or perpetrators of violence.

Exhibit 13-3 Fact Sheet provides information on peer (youth) violence.

Dating Violence

Like domestic violence, dating violence includes a continuum of behaviors that undermine one partner's self-esteem and establish



the other's control and dominance. Such behaviors include insults, embarrassment, rumors, name calling, suspicion, or belittlement and other forms of emotional and verbal abuse, as well as physical and sexual violence.

Two out of three rapes occur in what could be called "dating situations". The majority of dating violence is perpetrated by males against females. In recent surveys, from 12% to 35% of adolescent girls reported that they had been physically and/or sexually assaulted in a dating relationship.

As in adult relationships, teen dating violence can lead to severe injury or death. Abuse may escalate as a relationship becomes more serious. Violence and harassment may increase when the victim tries to end the relationship. Dating violence crosses all racial and ethnic lines and is found in all religious groups and social classes. Gay and lesbian youth, too, are vulnerable to dating violence, and may face additional, serious barriers to seeking help. Victims frequently report experiencing social isolation as well as school failure.

What Schools Can Do

- Educate school personnel about the warning signs of dating violence and how to respond to it.
- Identify area resources for victims or survivors and abusers.
- Develop a confidentiality policy to protect the safety of students or staff who disclose abuse and guide decisions about whether and when parents should be informed. It is important to keep detailed records of any in-school incidents, disclosures, or injuries in case a student later pursues legal remedies.
- Collaborate with a local battered women's program to provide preventive education for junior high and high school students as part of the school's comprehensive health education program.
- Organize a peer education and support program, training youth to reach out to classmates at risk for violence.
- Provide on-site support groups for victims of dating violence; work with local batterer treatment programs to develop groups for abusive adolescents. Mediation is not recommended as an intervention for dating violence.
- Inform parents, students, and staff about the warning signs and community resources for abused or abusive youth.

Exhibit 13-4 Fact Sheet provides information on dating violence.

Sexual Assault

Sexual assault is violence and violation acted out by sexual means. Rape and other sexual assaults are serious violent crimes that have



devastating, long-term effects on the lives and health of survivors. The overwhelming majority of all reported sexual assaults are perpetrated by someone known to the survivor, and most sexual assaults occur in a home setting. Data collected by rape crisis centers show that fewer than 20% of attackers are strangers. Sexual assault occurs in all racial, ethnic, religious, and socioeconomic groups, as well as in the heterosexual, gay and lesbian communities. Nationwide, it is estimated that one in three girls and one in six boys will be sexually assaulted by the age of 18, and many survivors typically do not report the assault to police or to a health care provider.

Sexual abuse occurs in the context of a cycle of coercion and threat of violence known generally as “battering”. Teen battering can set the stage for coercive sex later. When teens explore their own feelings about sexuality and dating, they try to make sense of societal messages about sex, messages from their families and peers, and their own feelings. It may be that after a sexual experience with a peer, boys or girls begin to wonder about whether they were abused. They may turn to trusted peers or adults who can facilitate a teen’s exploration of his or her confused feelings and begin to assist in making judgments about their experiences.

Sexual assault is both a personal crisis and a health problem. Efforts to deal with sexual assault should address the need for sensitive, timely, and appropriate services for survivors and their families as well as the need for preventive education and increased community awareness about the dangers of sexual assault and the need to prevent it.

What Schools Can Do

- Provide all school nurses, health teachers, counselors, coaches, classroom teachers, and administrators with training on issues of sexual assault.
- Help all schools respond to sexual assault in a consistent, sensitive manner by establishing a pre-K–12 protocol, covering all issues of sexual assault and sexual harassment, including reporting requirements, handling disclosure, referrals for services, and confidentiality.
- Contact the local rape crisis center and the battered women’s program to learn about services offered by each.
- Incorporate age-appropriate information on sexual assault into comprehensive health education programs and school-based health center intake forms. Information should take into account the fact that students have diverse cultures, ethnicities, economic situations, religious beliefs, and sexual orientations.
- Increase awareness of rape crisis center services by posting information in key locations such as rest rooms, locker rooms, and administrative, counseling, and school health offices.
- Set up on-site or off-site counseling groups for sexual assault survivors. Maintain up-to-date information



on counseling services for adults, adolescents, and children. Provide this information to employee assistance programs and teachers' unions.

Exhibit 13-5 Fact Sheet provides information on sexual assault.

Sexual Harassment

Sexual harassment in schools is any unwanted or unwelcome sexual attention from peers, subordinates, supervisors, customers, clients, or anyone the victim may interact with in order to fill job or school duties and that interferes with a student's right to pursue an education or to participate in school programs and activities. Harassment behaviors include grabbing or touching body parts, pulling up dresses or pulling down pants and gym shorts, making sexually explicit comments or jokes either verbally or in writing, making unwanted sexual gestures or using sexual words or names, "flashing" (exposing genitals), or pornography. Sexual harassment from peers or staff members is also included, as are coercive experiences where individuals are ganged up on (e.g., in a school rest room or on a playground).

Sexual harassment is a serious form of violence. Young women are the most frequent victims of sexual harassment in schools. It is more likely to be initiated by a fellow student than by a teacher. A 1993 Louis Harris survey of eighth to eleventh graders (commissioned by the American Association of University Women Educational Foundation) found that 85% of girls surveyed and 7% of the boys had experienced some type of sexual harassment in school. A third of the students reported they had been sexually harassed for the first time before they reached seventh grade. Another finding was that 66% of the boys and 52% of the girls surveyed admitted having sexually harassed someone themselves. Exhibit 13-2 Policy provides sample guidelines for recognizing and dealing with sexual harassment.

What Schools Can Do

- Take very seriously any reports of harassment.
- Train staff to recognize harassment and be familiar with appropriate interventions.
- Establish explicit policies and grievance procedures to stop harassment.
- Develop specific recommendations about what children should do about threats or experiences of sexual harassment.
- Give small groups of victims the opportunity to talk about their experiences.
- Provide individual counseling for perpetrators to help individual students and improve the school's climate.
- Support children in developing their sense of what feels safe to them. Exercises to clarify "things that help me feel safe" in various situations can be used to reinforce this notion.



UNINTENTIONAL INJURIES

Unintentional injuries may result from the interaction between a child's developmental stage, a particular product or environment, and parental or school awareness of a child's abilities. For example, motor vehicle-related injuries are a concern for children of all ages. However, the causes of injury are related to a child's age and abilities. Infants are most often injured as occupants, preschoolers as occupants or pedestrians in driveways, elementary school children as pedestrians and bicyclists, and adolescents as drivers and passengers.

As with violence, there are factors that contribute to unintentional childhood injuries. Alcohol, drug use, and poverty put children at risk. Motor vehicle injuries are the leading cause of fatal and nonfatal injuries. Bicycle crashes and falls from climbing equipment on playgrounds constitute a major cause of injury among children ages 6 to 12 years.

Prevalence of Injuries

- Among children, for every death from an injury, there are 42 hospitalizations and 1,120 visits to the emergency department.
- In a single year in Massachusetts, one in five children sustains an injury serious enough to require a hospitalization or an emergency department visit.
- In Massachusetts, injuries to children and young adults in one year alone cost almost one billion dollars in lifetime health care costs and lost earnings.
- Adolescents are a particularly high-risk population for injury.
- In all injury categories, males are more likely than females to incur an injury.

Preventing Unintentional Injuries

Much research and testing of safety products laws, regulations, and educational strategies has revealed that there may be many very effective tools to prevent injuries; the challenge is to get them into place so that they may be used by everyone. Former Surgeon General C. Everett Koop, M.D. has stated: *"If disease were killing our children in the proportions that injuries are, people would be outraged and demand that the killer be stopped."* With the implementation of only 12 prevention strategies, childhood deaths from trauma could be reduced by 29% in the United States. These strategies include:

- Use of infant car seats for children under age 4 and air bags for child front seat occupants.
- Use of helmets by motorcycle passengers and bicycle riders.
- Poison prevention controls.
- Barriers around swimming pools.
- Use of smoke detectors.



- Handgun control.
- Measures to prevent choking or suffocation.
- Window bars to prevent falls.

Types of Unintentional Injuries

This section contains descriptions of the most common causes of injuries to children with strategies for schools to be involved in prevention and intervention. Exhibit 13-6 through Exhibit 13-13 Fact Sheets provide information on types of unintentional injuries. These are meant to be duplicated for use by your school.

Playground Safety

Continuous attention needs to be given to playgrounds to ensure they present as safe a play area as possible. Parent/staff organizations can be strong advocates for improving play environments. Lowering the height of equipment and providing impact-absorbing surfaces can reduce the number and severity of injuries on playgrounds.

Playgrounds may present hazards that could have a devastating impact on a child. Children's play includes risk taking. Children may not know the limits of their own physical development, making those children moving into new play spaces (typically at ages 3 and 6) at highest risk. Therefore, playgrounds should not contain items that can cause injury in the natural course of play. The most critical areas to address are surfaces, maintenance, supervision, and spacing:

- The surface under equipment should provide an adequate depth of impact-absorbing materials: sand, wood chips, pea gravel or solid rubber mats or tiles. Never install cement, asphalt, grass, or dirt under equipment.
- Follow the manufacturer's maintenance instructions and recommended inspection schedule.
- Repair or remove all hazards.
- For effective supervision to occur, remove visual barriers, position adults for optimum view, and promulgate rules and policies regarding clothing, restrictions, and safe play to be shared with students and parents.
- Design the playground to allow children to be able to move safely from one activity to another through proper spacing between equipment and other structures.

What Schools Can Do

- Promote safe play behaviors regularly through classroom lessons, audiovisuals, student-developed rules, and trained playground monitors.
- Require school personnel to track playground injuries, including the age of the child and the equipment involved.



- Arrange a purchasing and replacement schedule that weighs equipment durability and safety with available funds.
- Develop a system for regular maintenance as well as a plan for equipment repair, replacement, and/or removal.
- Provide access to children with disabilities.
- Inform parents and staff about safe playgrounds policies.

Exhibit 13-6 Fact Sheet provides information on playground safety.

Pedestrian Safety

Pedestrian injuries are the leading cause of death in children ages 4 to 8. As growing children with increased responsibility for getting to school and play areas on their own, children ages 5 to 9 are most likely to be injured as pedestrians. Contributing to the vulnerability of school-aged children is their inability to judge the speed and distance of oncoming cars, small size, narrow field of vision, poor impulse control, and difficulty judging the direction of sounds.

Most child pedestrian injuries occur between 3:00 and 5:00 P.M. Six year olds in Massachusetts are particularly vulnerable, and twice as many boys are injured than girls. For grades K–3, most injuries occur when children run into the street mid-block; older children are most often injured at intersections.

What Schools Can Do

- Teach pedestrian safety in the classroom at the beginning of each year.
- Modeling safe pedestrian behaviors by school personnel is recommended to reinforce positive behaviors among children. Teachers can use walking field trips as opportunities to model safe street crossing.
- Help students notice pedestrian hazards and learn how to avoid them.
- Demonstrate and practice safe street crossing.
- Teach about traffic signs and signals, and safe walking zones.
- Promote the use of retro-reflective clothing and/or accessories when walking in the dark is unavoidable.
- Develop pedestrian policies for the school community.
- Create pedestrian crossing areas protected from bus and auto traffic.
- Encourage parent participation in teaching and reinforcing safe pedestrian behaviors.
- Promote involvement of municipal and community agencies in creating safe walking policies and areas and enforcing pedestrian-related traffic laws.



Exhibit 13-7 Fact Sheet provides information on pedestrian safety.

Bicycle Safety

Bicycle safety, particularly the promotion of bike helmet use by children, is one of the fastest-growing areas of activity among injury professionals, as well as an increasing concern among parents. Most bike-related deaths result from head injury, and most involve falls and collisions with objects, pedestrians, and other cyclists. Use of approved bike helmets (ANSI or SNELL) can reduce head injury by 85%. In Massachusetts, any person 12 years of age or younger operating a bicycle or being carried as a passenger on a bicycle on a public way, bike path, or any other public right-of-way must wear an approved helmet (M.G.L. c. 85, s. 13A).

What Schools Can Do

- Teach bike safety in the classroom.
- Encourage the purchase and wearing of bike helmets.
- Develop a policy requiring helmet use for students riding bikes to school.
- Model safe bicycling behaviors.
- Organize bulk discount helmet purchase and distribution.
- Incorporate bike helmet simulation experiments into science curricula.
- Organize bike rodeos.
- Invite local retailers to provide incentives to children observed wearing helmets.

Exhibit 13-8 Fact Sheet provides information on bicycle safety.

Fire and Burn Safety

While fire and burn injuries and deaths are not a high-risk issue for school-aged children, teaching fire safety behaviors to young children as well as older children with self-care and child-care responsibilities can be a family lifesaving measure. Despite Massachusetts smoke detector laws, many fatal fires occur in residences in which smoke detectors are missing or nonfunctioning. Smoke detectors can provide a warning should a house fire occur. Families living in older housing stock are at especially high risk.

Scalds, while rarely fatal, are very common among preschoolers. Hot tap water, hot beverages, boiling water, and hot food are the most likely agents. Burns may be caused from contact with cigarette lighters, home heating devices and other hot appliances. For school-aged children, there is considerable injury resulting from handling fireworks. Match play is common among elementary school boys; older boys may receive severe burns when flammable liquids are misused or used in an enclosed space. Adolescents may suffer electrocution and burns from climbing towers carrying power lines. Many first-time job options involve food preparation, which may incur a high risk of burns.



What Schools Can Do

- Teach children: “*Stop, drop, roll & cool.*”
- Teach children fire exit procedures. Practice “crawling low” under a sheet held to simulate level of good air during a fire.
- Teach children how to call for emergency help.
- Teach children basic home fire prevention practices; encourage family involvement through take-home activities.
- Refer students with fire-setting behavior (as appropriate according to school policy) to appropriate services immediately.
- Use local fire prevention officers as resources in classroom activities.

Exhibit 13-9 Fact Sheet provides information on fire and burn safety.

Motor Vehicle Occupant Protection

While motor vehicle crashes are the leading cause of disabling injury and death for people ages 1 to 34, the use of safety belts reduces this risk significantly. Children ages 5 to 9 are at highest risk for pedestrian and motor vehicle occupant injuries, together accounting for 40% of deaths. Children ages 10 to 14 are at highest risk for bicycle-motor vehicle collisions. Adolescents ages 15 to 19 are at highest risk both as occupants and drivers; alcohol and speed often are factors.

What Schools Can Do

- Provide age-appropriate instruction in passenger safety.
- Develop school policies that reinforce Massachusetts law. Driver education instructors and students must wear a safety belt on every ride.
- Provide educational materials to parents.
- Encourage students to buckle up on every ride, and remind family and friends to buckle up also.
- Work with local law enforcement and community groups to increase compliance with the law.
- Sponsor prom-time simulated car crash events and alcohol-free graduation parties.

Exhibit 13-10 Fact Sheet provides information on motor vehicle occupant protection.

School Bus Safety

School buses are associated with relatively few injuries and deaths. Children ages 4 to 7 are at highest risk of injury, with two-thirds of the deaths occurring as children get on or off the bus. Massachusetts law requires that all pupils receive classroom



instruction in school bus safety three times a year and participate in on-bus emergency evacuation drills twice annually.

What Schools Can Do

- Educate children and parents about safe bus-riding behaviors.
- Reinforce safe behaviors on field trips.
- Develop appropriate bus pick-up and drop-off policies.
- Conduct bus evacuation drills according to Massachusetts law.
- Work with the local traffic enforcement officer to ensure adherence to bus-related traffic laws.

Exhibit 13-11 Fact Sheet provides information on school bus safety.

Sports Safety

Sports are the most frequent cause of injuries for adolescents. While the vast majority of these injuries will be minor, spinal cord, head, and eye trauma are severe nonfatal injuries. Overuse injuries may result in lifelong conditions such as tendinitis and other mobility impairments. Team sports are the most *frequent* cause of sports injury, while individual sports are responsible for the most *severe* injuries.

What Schools Can Do

- Require coaches to be trained and certified in each sport they coach.
- Require preparticipation physical examinations for all athletes.
- Require, maintain, and improve protective equipment.
- Collect and maintain injury data from all practices and games.
- Maintain and improve the surfaces of playing fields.
- Discourage injured athletes from playing.
- Inform parents and athletes about specific risks and protective strategies.
- Require helmets and mouthguards for all contact sports.
- Develop clinics that assist athletes and coaches with training and conditioning.

Exhibit 13-12 Fact Sheet provides information on sports safety.

Teens at Work

Large numbers of teens work after school, and a recent Massachusetts study found that work-related injuries constitute a significant proportion of all injuries to this age group. The two top



causes of death are motor vehicles and machinery. Construction was the most likely industry in which an adolescent could die.

Occupational injuries to teens range from grease burns in restaurant kitchens to back injuries lifting patients in nursing homes, to lacerations from opening boxes in grocery stores. As adolescents begin to explore the adult world of work, they need to develop important skills in recognizing the potential job hazards that exist in all types of work. As workers, teens have rights to a safe and healthful workplace. They need to develop the ability to say “no” to unsafe or restricted work. Guiding adolescents and parents toward choosing a safe and meaningful working experience that does not detract from school should be a goal of Massachusetts schools and communities.

What Schools Can Do

- Provide teachers, staff, parents, and teens with education about choosing appropriate and safe work.
- Ensure that schools have the necessary training to responsibly issue work permits as required under the state child labor laws.
- Provide training to teachers, staff, and students on recognizing and preventing job hazards and on rights under the child labor and workplace health and safety laws.
- Report cases of injuries to working teens immediately to the Department of Public Health’s Occupational Health Surveillance Program at (617) 727-6274.
- Work with employers of teens to ensure compliance with child labor laws and a safe and healthful workplace for all employees.
- Assign students to interview relatives about the kind of work they do and whether they or others in the family have ever experienced a work-related illness or injury.
- Review cases of injuries among working teens, and brainstorm causes of the injuries as well as steps for preventing similar injuries from occurring to others.
- Conduct field trips to or view slides of workplaces. Have the students use a checklist to identify potential job hazards.
- Teach students the skills needed to say “no” to performing tasks or work activities that are restricted by child labor laws.

Exhibit 13-13 Fact Sheet provides information on teens at work.



SELECTED MASSACHUSETTS SAFETY LAWS

In addition to the following safety laws, there may be other safety mandates from individual towns or school systems regulating such issues as first aid and CPR certification, placement of fire extinguishers, or health education requirements.

Health Education in Public Schools

The Massachusetts General Laws specify that safety, first aid, fire safety, burn injury prevention, and school bus safety be included in health education in public schools. Chapter 753 of the Acts of 1974 specifies:

Instruction in health education shall include, but shall not be limited to: consumer health, ecology, community health, body structure and function, safety, nutrition, fitness and body dynamics, dental health, emotional development, and training in the administration of first aid, including cardiopulmonary resuscitation. The Department of Education shall pay for the cost of any such instruction in cardiopulmonary resuscitation, provided, however, that a school committee may by majority vote decide that such instruction shall not be offered. In connection with physiology and hygiene, instruction as to the effects of alcoholic drinks and of stimulants, including tobacco and narcotics on the human system, as to tuberculosis and its prevention, as to detection and prevention of breast and uterine cancer, and as to fire safety, including instruction in the flammable qualities of certain fabrics, and as to the prevention and treatment of burn injuries, shall be given to all pupils under public control, except schools maintained solely for instruction in particular subject areas.

Transportation-Related Laws

The Child Passenger Safety Law (M.G.L. c. 90, s. 7AA) requires children ages 5 years old or less to be fastened in a properly adjusted car seat or seat belt and children ages 6 to 12 to be properly restrained with a seat belt while traveling in a motor vehicle.

Another law is the Safety Belt Law (M.G.L. c.90, s. 13A) which requires everyone over age 12 to wear a safety belt when riding in a motor vehicle. Driver education instructors and students must wear a safety belt on every ride.

Any motor vehicle used to transport vocational students participating in a work project to and from the work site, and having permanent seating accommodations for not more than 14 persons in addition to the operator, is required to be equipped with a seat belt, which shall be fastened about each passenger for each permanent seating accommodation.

M.G.L. c. 85, s. 13A requires that a secured, approved, fitted helmet be worn by persons 12 years of age and under who are operating or being carried as a passenger on a bicycle on a public way, bicycle path, or any other public right-of-way. The law does not apply on private property.



CHAPTER 13

Fire Drill Regulations

According to the 527 Code Massachusetts Regulation (CMR) 10.09, all schools shall conform to the following fire drill regulations:

The responsible school official in charge of the school or the school system shall formulate a plan for the protection and evacuation of all persons in the event of a fire, and shall include an alternate means of egress for all persons involved; such a plan to be presented to and approved by the head of the fire department.

The responsible school official in charge of the school or the school system shall see that each class instructor or supervisor shall receive proper instructions on the fire drill procedure specified for the room or area in which that person carries out his/her duties before assuming such duties.

Every student in all schools shall be advised of the fire drill procedure or shall take part in a fire drill within three days after entering such school.

The head of the fire department, or person designated by him/her shall visit each school at least four times each year for the purpose of conducting fire drills and questioning the teachers and supervisors. These drills shall be conducted, without advance warning to school personnel other than the person in charge of the school at the time.

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RESOURCES

Injury Prevention Resource Center
Massachusetts Department of Public Health
150 Tremont Street, 3d Floor
Boston, MA 02111
(617) 727-1246; fax: (617) 727-6088

INJURY AND VIOLENCE PREVENTION



Child Abuse and Neglect

For reporting suspected abuse or neglect, call local Department of Social Services

9 A.M. 5 P.M., Monday-Friday

24-hour hotline: (800) 792-5200 in all areas except Region II (Worcester area)

(800) 922-8169 in Region II (Worcester area)

Children's Trust Fund
10 West Street, 3d Floor
Boston, MA 02111
(617) 727-8957; fax: (617) 727-8997

Parents Anonymous of Massachusetts
(800) 882-1250

Parental Stress Line
(800) 632-8188

Child and Adolescent Injury (Intentional and Unintentional)

Children's Safety Network
Education Development Center
55 Chapel Street
Newton, MA 02160
(617) 969-7100; fax: (617) 244-3436

Dating Violence

Dating Violence Intervention Project
PO Box 530
Harvard Square Station
Cambridge, MA 02238
(617) 868-8328

Domestic Violence

Massachusetts Coalition of Battered Women Service Groups
210 Commercial Street
Boston, MA 02109
(617) 248-0922

Head Injury Prevention Speakers and Materials

Massachusetts Head Injury Association
484 Main Street, #325
Worcester, MA 01608
(508) 795-0244; fax: (508) 757-9109

Peer Violence

Contact the local Regional Prevention Center. See General Resources in Section IV of this manual.

Playground Safety

Massachusetts Recreation and Park Association
PO Box 5135
Cochituate, MA 01778
(508) 650-1126; fax: (508) 650-0786

Product Hazard or a Product-related Injury

U. S. Consumer Product Safety Commission
Washington, DC 20207
(800) 638-CPSC

Rape Crisis and Sexual Assault

Massachusetts Coalition of Rape Crisis Services
Worcester Rape Crisis Center
100 Grove Street
Worcester, MA 01605
(508) 791-9546



CHAPTER 13

Boston Area Rape Crisis Center
99 Bishop Allen Drive
Cambridge, MA 02139
(617) 492-RAPE

Sexual Harassment

Who's Hurt and Who's Liable: Sexual Harassment in Massachusetts Schools. A Curriculum Guide for School Personnel
Massachusetts Department of Education
350 Main Street
Malden, MA 02148
(617) 388-3300 X 233

Guidelines for Recognizing and Dealing with Sexual Harassment
Minuteman Technical School
758 Mannett Rd.
Lexington, MA 02173
(617) 861-6500

SAFEKIDS Campaign and Materials

National SAFEKIDS Campaign
111 Michigan Avenue, NW
Washington, DC 20010-2970
(202) 884-4993; fax: (301) 650-8038

Spinal Cord Injury Prevention

National Spinal Cord Injury Association
600 West Cummings Park, Suite 2000
Woburn, MA 01801
(800) 962-9629

Sports Injury Prevention

National Youth Sports Foundation for the Prevention of Athletic Injuries
10 Meredith Circle
Needham, MA 02192
(617) 449-2499; fax: (617) 444-3288

Traffic Safety Resources (Motor Vehicle, Impaired Driving, Bicycle and Pedestrian)

Governor's Highway Safety Bureau
100 Cambridge Street, Room 2104
Boston, MA 02202
(617) 727-5074; fax: (617) 727-5077

Violence Against Women (Including Domestic Violence, Rape, and Dating Violence)

Women's Health Unit, MDPH
150 Tremont Street, 3d floor
Boston, MA 02111
(617) 727-7222; fax: (617) 727-6088



EXHIBIT 13-1 POLICY

Sample Policy: Expulsion for Weapons, Drugs and Assaults, Grades 9-12

The Commonwealth of Massachusetts Educational Reform Act of 1993 stipulates that any student who is found on school premises or at school-sponsored or school-related events, including athletic games, *in possession of a dangerous weapon or in possession of a controlled substance* as defined in Chapter 94C, including, but not limited to, marijuana, cocaine and heroin, may be subject to expulsion from the school or school district by the Principal. *Additionally, any student who assaults a Principal, Assistant Principal, teacher, teacher's aide or other member of the educational staff on school premises or at school-sponsored or school-related events, including athletic games, may be subject to expulsion from the school or school district by the Principal.* Therefore, this policy applies to the possession of dangerous weapons, the possession of controlled substances, and to assaults on educational staff by students.

I. WEAPONS

Disciplinary Action for Incidents Involving Weapons

Bringing a weapon to school, using a weapon on school grounds or at a school activity, or having a weapon in your locker, pocket, or while you are at school, on the bus, or at an after-school activity, is a grave offense and is against school rules and regulations. *It is also against the law.* There are two kinds of weapons: 1. those that are "legally dangerous," which include weapons that are against the law to possess, such as guns, objects sharpened into blades, chains, or whips, as well as any metal objects of no academic purpose; and 2. "contraband" weapons, which, though not defined as weapons, can become dangerous *when they are used in a threatening way*, for example, baseball bats or scissors. If a student is found with either a legally dangerous weapon or a contraband weapon, the punishment is very serious. The following procedure will apply:

1.
 - i. The staff member involved will contact the House Administrator.
 - ii. The House Administrator will notify:
 - a) The Director of Safety;
 - b) Principal of _____ School;
 - c) The parent(s) or guardian(s) by telephone, with a follow-up letter, and if necessary, by certified mail;
 - iii. The Director of Safety and Security will notify the police, the Principal and the Assistant Superintendent for Administration; a copy of the incident report will be forwarded to the Principal and to the Assistant Superintendent of Schools by the end of the school day.
 - iv. The student will be removed from school grounds after the parent(s) or guardian(s) have been contacted.
 - v. In the case of a "legally dangerous" weapon, the police will file a complaint with the County District Court, and, if necessary, take other appropriate action.
 - vi. The House Administrator will conduct an informal suspension hearing at the school to determine if the weapons policy has been violated. The hearing may be delayed one (1) day at the parent's/guardian's request to allow him or her to be present. The hearing will include the student, the parents or guardian, the Principal or designee, and the staff member who reported the incident. At the hearing the student will be

¹ Legally dangerous weapons include firearms (guns of any kind, knives, razors or other objects sharpened into blades, chains, whips, or any combination of objects fashioned into such, sling shots, clubs, karate sticks or rods of any kind, pipes metallic knuckles, screw drivers, wrenches, hammers or other metal objects or no academic purpose. Fireworks and explosives of any kind are also considered dangerous weapons.

² The Cambridge School Department definition of "Weapon" includes items which become "contraband" because they are used as weapons or to intimidate another person. for example: bottles and cans, scissors, hat pins, metal files, athletic equipment (e.g. baseball bats or hockey sticks), umbrellas, chemical sprays (e.g. spray paint, mace, or any aerosol), etc.

[Used with permission of the Cambridge, MA Public School]



told the reason for the suspension and be given a chance to explain to the House Administrator if he or she believes that the suspension is not deserved.

- vii. If the House Administrator finds the student to be in violation of the weapons policy, the House Administrator will **IMMEDIATELY SUSPEND THE STUDENT FOR TEN (10) DAYS** and further disciplinary action may be taken, as stipulated below. Copies of the suspension letter will be sent to the Assistant Superintendent, Principal, Security, and counselor.

2. During the ten-day (10) suspension period, the student and parent(s) or guardian(s) will be notified in writing of an opportunity to have a hearing with the Principal to discuss whether or not the student's actions warrant expulsion according to M.G.L. c. 71, s. 37H. Further, the student shall have the right to representation at the hearing, along with the opportunity to present evidence and witnesses. If, after the hearing, the Principal decides to expel the student based on the evidence presented, the expelled student will be informed that he/she shall have the right to appeal the decision to the Superintendent of Schools. The expelled student shall have ten days from the date of the expulsion to notify the Superintendent of Schools of his/her appeal. The student has the right to counsel at a hearing before the Superintendent or her designee. The subject matter of the appeal shall not be limited solely to factual determination of whether the student has violated any provision of this section.

When a student is expelled under the provisions of this section and applies for admission to another school for acceptance, the Superintendent of the sending school shall notify the Superintendent of the receiving school of the reasons for the pupil's expulsion.

After the hearing before the Principal, the Principal may decide to suspend rather than expel a student who has been determined by the Principal to have been in violation of this Policy. In that case, the Principal must state, in writing, to the School Committee, "... his reasons for choosing the suspension instead of the expulsion as the most appropriate remedy. In his statement, the Principal shall represent that, in his opinion, the continued presence of this student in the school will not pose a threat to the safety, security and welfare of the other students and staff in the school" (from M.G.L. c. 71, s. 37H).

All appropriate regulations, including those under Massachusetts Chapter 766, shall be observed in connection with the administration of this policy.

II. DRUGS

Any student who is found on school premises or at school-sponsored or school-related events, including athletic games, in possession of a controlled substance as defined in Ch. 94C including, but not limited to, marijuana, cocaine or heroin, may be subject to expulsion from the school or school district by the school Principal.

Any staff member who observes or becomes aware of a student in possession of a controlled substance shall follow the procedures set forth in section I,1 (above). Thereafter, the procedures set forth in section I,2 shall apply.

III. ASSAULTS

Any student who assaults a Principal, Assistant Principal, teacher, teacher's aide or other educational staff on school premises or at school-sponsored or school-related events, including athletic games, may be subject to expulsion from the school or school district by the Principal.

Any staff member who observes or becomes aware of any such assault shall follow the procedures set forth in section I,1 (above). Thereafter, the procedures set forth in section I,2 shall apply.

The Cambridge Public Schools also have a weapons policy for grades K-8. It follows the same format as the one for grades 9-12: disciplinary action, legally dangerous vs. contraband weapons, etc.



EXHIBIT 13-2 POLICY

Sample Policy: Guidelines for Recognizing and Dealing with Sexual Harassment

Definition: Sexual harassment is unwanted sexual attention from peers, subordinates, supervisors, customers, clients, or anyone the victim may interact with in order to fill job or school duties. The range of behaviors includes: verbal comments, subtle pressure for sexual activity, leering, pinching, patting, and other forms of unwanted touching.

Legal Aspects: Students are protected from sexual harassment under the provisions of Title IX, since courts have found sexual harassment to be a form of sex discrimination. In February 1992, the U.S. Supreme Court ruled that under Title IX schools can be sued for not protecting their students from sexual harassment. If sexual harassment involves a minor student in a school setting, it can also be considered a criminal offense under laws relating to child abuse.

Dimensions of the Problem: Sexual harassment is a problem in every school as well as in every workplace. In a 1993 survey of eighth through eleventh grade students by Louis Harris and Associates, 85% of girls and 76% of boys indicated they had experienced some type of sexual harassment in school. Another survey finding which surprised many people was that 66% of boys and 52% of girls surveyed admitted having sexually harassed someone themselves.

Effects of the Victim: The victim may be in the office or school less in order to avoid the harassment (more sick days taken). Some students may transfer out of classes and even think about changing schools. It interferes with their ability to participate in class, to pay attention and to study. Grades and self-image are adversely affected. Sexual harassment can also produce physical and psychological effects similar to those experienced by rape victims. Professional counseling may be necessary.

Grievance Procedures:

- (1) By law, the victim defines sexual harassment. What one person may consider acceptable behavior may be viewed as sexual harassment by another person. It is important that the victim make it clear to the harasser that the behavior is bothering him or her. This can be done in ways described in items (2) and (3).
- (2) Always take every report of sexual harassment seriously and take some kind of action immediately. Many times, situations involving student-to-student nonphysical harassment can be quickly and quietly resolved if the harasser and the victim can be persuaded to sit down and talk things over in the presence of a third person.
- (3) If the victim does not agree to meet with the harasser, the victim should write the harasser a letter giving:



- (a) an exact description of the behavior, including when and where it occurred.
- (b) a description of how the behavior made the victim feel “embarrassed,” “upset,” “angry,” etc.
- (c) a request that the behavior stop because it is sexual harassment and is against the law.
- (d) a promise that if the behavior stops, nothing further will be said and no further action will be taken.
- (e) a warning that showing the letter and/or talking about it to other students or engaging in any other retaliatory behavior will subject the harasser to disciplinary action.

The letter should be signed and dated by the victim, indicating that a copy of the letter has been given to a school staff member. The letter should be hand delivered to the harasser by either the victim or a school staff member. In most instances this will stop the harassment; if it doesn't, there is now a legal basis for taking further action.

- (4) In cases of sexual harassment requiring a formal investigation to determine whether the accusation is justified, it is important to:
 - (a) have a supportive faculty member of the same sex as the accuser present at all discussions with the accuser involving the case.
 - (b) keep the investigating group as small as possible to protect the rights of both parties and to prevent the investigation from becoming an inquisition.

Retaliation: Retaliation in any form against any person who has filed a complaint relating to sexual harassment is forbidden. If it occurs, it could be considered grounds for dismissal of staff personnel and/or removal from the educational setting for a student.

Confidentiality: It is expected that those involved with sexual harassment investigations will protect the confidentiality of all information relating to the case.



EXHIBIT 13-3 POLICY

Sample Staff Procedure for Reporting Suspected Child Abuse and Neglect

Under Massachusetts General Laws Chapter 119, Section 51A 51G, any public or private school teacher, educational administrator, guidance or family counselor, nurse, or social worker, as well as certain other professionals who in his/her professional capacity shall have reasonable cause to believe that a child under eighteen years is suffering serious physical or emotional injury resulting from abuse by a caretaker, including sexual abuse, or neglect, including malnutrition, shall immediately report such conditions to the Department of Social Services (DSS).

The guidelines below are written to assist school staff in the handling of suspected abuse and neglect cases.

1. Each school shall maintain a designated **Child Abuse Team** for assisting in the response to cases of suspected child abuse. The **Child Abuse Team** shall include the building Principal who, upon being notified by a staff member of suspected child abuse, shall then become responsible to make the report in the manner required by the law; a counselor; the school employee with the initial concern; and any other staff members whose membership might be helpful (e.g., teachers, METCO specialist, school nurse)
2. The school employee who has the initial concern will contact a member of the **Child Abuse Team**.
3. The Team member will convene an immediate meeting of the **Child Abuse Team** to discuss steps to be taken in order to determine whether and when to file a 51A. These steps may include:
 - a. Gathering additional information from the child; documenting any physical signs of abuse.
 - b. Gathering additional information from other people familiar with the child and his or her situation. Confidentiality must be maintained in these cases.
 - c. Consulting with Department of Social Services.
4. The Team then decides by consensus whether to file a report as a Team. *Nothing in this procedure relieves any mandated reporter of his/her mandatory obligation to report cases of suspected child abuse and/or neglect as defined by the statute.*
5. If the Team decides that a 51A will be filed, the Team determines who will telephone the report to the nearest DSS (Framingham Office **(508) 872-8122** between 9:00 A.M. and 5:00 P.M., and after 5:00 P.M. or on the weekends, **(800) 792-5200**). It is recommended that the school administrator complete the required written forms. DSS requires these forms to be submitted within 48 hours of the oral report.



6. Unresolvable differences of opinion among the **Child Abuse Team** members may inhibit filing as a Team. It is important to note, however, that if notified of the suspicion, the building Principal **assumes the responsibility of reporting**. If the Principal is not immediately present or available, the educator who has the initial suspicion (as defined by the statute) **must** call in the report to the DSS.
7. If the Team decides to file a 51A, the Team will also decide who will inform the parents and when this will take place. It is recommended that the Principal usually be the person to notify the parents. The timing of the notification of the parents should take into account that the essence of the Chapter 51A law is that the child's welfare is the top priority. DSS has discouraged notification of the parents or the legal guardians if the child will be placed at risk of further abuse when the fact of the interview is revealed. When this is the case, the Team should decide in consultation with DSS at what time the parents should be informed.
8. The Principal on the Team will inform the Superintendent of Schools within 24 hours of the filing of the 51A and send a copy of the 51A for filing in an administrative file.
9. When DSS requests to interview the child at school, the building Principal or his/her designee should always be present.
10. In the event of an emergency, when members of the Team are not available (such as on a Friday afternoon or before vacation), it is recommended that the staff member suspecting abuse consult with a counselor or administrator in another building. That person will assist the staff member in reaching a decision to file a 51A and in filing if appropriate.
11. Unless specifically mandated, no reference to the 51A report will be made in the child's permanent file (cumulative folder).
12. All administrators, counselors, teachers, and nurses in each building shall be made aware of this procedure by the school Principal.



EXHIBIT 13-1 FACT SHEET

Child Abuse and Neglect

In Massachusetts, one out of every 22 children is reported abused or neglected. Many cases go unreported. School-based prevention enables a community to take steps toward alleviating and preventing child abuse. It's important for educators to know about child abuse and neglect because:

- school personnel are in contact with children daily.
- school personnel are committed to removing barriers to learning that can result from abuse or neglect such as language or cognitive impairment or juvenile delinquency.
- school personnel are mandated by state law to report any suspicion of child abuse or neglect.

According to Dr. Cynthia Tower, Director of the Child Protection Institute "...so many survivors say they never would have gotten through their childhood if it hadn't been for that one teacher that supported them."

SCHOOL AND COMMUNITY GOALS

- Know the school system's child abuse and neglect reporting protocol.
- Know the signs and symptoms of abuse and neglect.
- Know how to respond to a child who discloses they have been abused.
- Know how to create a classroom climate that supports children who have experienced abuse.
- Have staff and parents learn how to introduce attitudes, information and skills to help children avoid becoming victims of abuse or neglect.

MANDATED REPORTING

Mandated reporters must file a report if they have reasonable cause to believe that: a child is suffering from serious physical or emotional injury resulting from abuse inflicted upon her/him, including sexual abuse; a child is suffering from neglect, including malnutrition; a child is physically dependent upon an addictive drug at birth.

RESOURCES: Child personal safety and assault prevention curricula for grades K-6, as well as teacher training, is offered free to all Massachusetts public and private schools through the Children's Trust Fund. The Children's Trust Fund also provides training materials; *How Schools Can Help Combat Child Abuse and Neglect*, *The Role of Educators in the Prevention and Treatment of Child Abuse and Neglect*, *Don't Shut Your Eyes to Child Abuse - If You See It, Report It*

SPECIAL NOTE: The Clearinghouse On Child Abuse And Neglect Information has a toll-free number - (800) FYI - 3366. April is National Child Abuse Prevention Month.

FOR MORE INFORMATION

Children's Trust Fund
10 West Street, 3rd Floor
Boston, MA 02111
PHONE: (617) 727-8957



CHAPTER 13

EXHIBIT 13-2 FACT SHEET

Domestic Violence

Abuse by a current or former partner is the leading cause of injury to women in the United States, with 1 in 3 homicides committed by a current or former partner. In a major nationwide survey conducted in 1990, 1 in 4 adult relationships included at least one act of violence in the previous year. Often, domestic violence and child abuse coincide: 40-60% of mothers of abused children are themselves abused, and about 50% of children of battered women are directly physically or sexually abused. Partner violence crosses all racial and ethnic lines and is found in all religious groups and social classes, and in gay and lesbian as well as heterosexual relationships.

Interviews with children whose mothers are abused show that they are aware of the violence. Children respond to domestic violence in a variety of ways. Many develop behavioral problems, either acting out aggressively or internalizing their distress in depression, withdrawal, eating disorders, or substance abuse. Often, child witnesses of violence develop stress-related illnesses or sleeping disturbances, or suffer from inadequate health care because of the abuse. Domestic violence may interrupt or delay children's emotional and cognitive development, and affect school performance. Some children will be injured, kidnapped, or killed by their mother's batterer.

SCHOOL AND COMMUNITY GOALS

- Require all nurses and guidance counselors to be trained in identifying and assisting children living with domestic violence; training should address risk assessment and guidelines for DSS reporting of domestic violence.
- Develop a policy for protecting the safety of families experiencing or fleeing domestic violence.
- Organize domestic violence awareness trainings for faculty.
- Collaborate with a local battered women's program to provide developmentally appropriate preventive education to students.
- Incorporate domestic violence into the school's comprehensive health education program.
- Organize a peer education and support program, where youth are trained to educate classmates about gender roles, respectful relationships, and non-violent conflict resolution.
- Inform parents of warning signs and community resources for battered women and children.

RESOURCES: Mass. Coalition of Battered Women's Service Groups and report, *For Shelter and Beyond: Ending Violence Against Women and Children*, *Children of Battered Women*, *Chain Chain Change--For Black Women Dealing with Physical & Emotional Abuse*, *Children of Domestic Violence: Healing the Wounds*, *Domestic Violence--The Effects on Children: A Guide for Educators*, *Mejor Sola Que Mal Acompañada--For the Latina in an Abusive Relationship*, *Mommy and Daddy are Fighting: A Book for Children about Family Violence*, *My Family and Me: Violence Free*, *Naming the Violence: Speaking Out About Lesbian Battering*

SPECIAL NOTE: Domestic Violence Awareness Month is observed nationwide each October.

SUGGESTED ACTIVITIES

- Organize students and staff to walk in the October Jane Doe Safety Fund Walk for Women's Safety, organized by the Massachusetts Coalition of Battered Women's Service Groups.
- Organize workshops on domestic violence for students, parents, and staff during Domestic Violence Awareness Month.

FOR MORE INFORMATION

Massachusetts Coalition of Battered Women Service Groups
210 Commercial Street
Boston, MA 02109
Phone: (617) 248-0922



EXHIBIT 13-3 FACT SHEET

Peer Violence

Peer violence has been identified as a major public health problem and one that affects students in urban, suburban and rural areas. Because 40% of all homicides occur between friends and acquaintances, violence prevention requires a comprehensive approach beyond the traditional criminal justice response. In Massachusetts, youth 15-24 have a homicide rate twice the overall rate; homicide is the leading cause of death for black male youth. The threat of violence is a daily reality for many teens. A 1992 study showed two-fifths of Massachusetts high school students sampled reported being in a physical fight in the last year. Over 20% reported carrying a weapon of some kind in the last 30 days; nearly 5% of males reported carrying a gun. Violence is a learned behavior; values, behaviors and interpersonal skills developed in early years can be critical in impacting on behavior in later years. Activities - both school and community-based - that promote non-violent values and teach non-violent alternatives to resolve conflict are important throughout a child/adolescent's development.

SCHOOL AND COMMUNITY GOALS

- Provide teacher/staff training in violence prevention and conflict resolution.
- Implement comprehensive, age-appropriate curricula on self-esteem and violence prevention including issues of racism, sexism and homophobia.
- Create peer leadership and conflict resolution mediation programs in high schools.
- Develop a violence prevention plan which includes input from staff and students.
- Participate in community-based violence prevention coalitions.
- Provide counseling and other support services to students at risk as victims, witnesses and perpetrators of violence.

RESOURCES: Prevention Center staff and peer leaders, community violence prevention coalitions, Massachusetts Adolescent Violence Prevention Project, Children's Safety Network Adolescent Violence Prevention Resource Center, Educators for Social Responsibility, Boston Violence Prevention Project, *Violence Prevention Curriculum for Adolescents*, Project Teen Health Training Manual for Gay, Lesbian and Bisexual Youth, Boston Area Violence Prevention Program Directory, *Taking Action: Guidelines For A Violence Prevention Program*, *Deadly Consequences: How Violence Is Destroying Our Teenage Population and a Plan To Begin Solving The Problem*

SUGGESTED ACTIVITIES: Develop a violence awareness campaign using student-designed posters, buttons or bumper stickers or student essay/rap contests on the dangers of violence; inaugurate a School Peace Prize for students, staff or community members; hold a Non-Violence Book Fair or Movie Night; involve students in letter-writing or TV violence monitoring projects.

SPECIAL NOTE: Violence Prevention Awareness Week is observed in May or June. The Office of Violence Prevention will contact local school systems regarding dates and activities.

FOR MORE INFORMATION

Injury Prevention and Control Program
Bureau of Family and Community Health
Mass. Department of Public Health
150 Tremont Street, 3rd Floor
Boston, MA 02111
PHONE: (617) 727-1246 FAX: (617) 727-6088



EXHIBIT 13-4 FACT SHEET

Dating Violence

Violence and abuse in dating relationships are serious problems facing many adolescents. The majority of such violence is perpetrated by boys against girls, although teen girls are more likely to fight back against an abuser than adult women experiencing partner violence. In recent surveys, from 12% to 35% of adolescent girls reported that they had been physically and/or sexually assaulted in a dating relationship.

Dating violence typically includes a continuum of controlling behavior, from emotional and verbal abuse to physical and sexual violence. As in adult relationships, teen dating violence can lead to severe injury or death. Often, the abuse escalates as the relationship becomes more serious. Violence and harassment are also likely to increase when the victim tries to end the relationship. Dating violence crosses all racial and ethnic lines and is found in all religious groups and social classes. Gay and lesbian youth also are vulnerable to dating violence and may experience problems seeking help.

SCHOOL AND COMMUNITY GOALS

- Require nurses and guidance counselors to be trained in identifying and responding to dating violence. Identify area resources for victims/survivors and abusers.
- Develop a confidentiality policy to protect the safety of any students or staff who disclose abuse, and to determine whether and when parents should be informed. It is important to keep detailed records of any in-school incidents, disclosures, or injuries in case a student later chooses to pursue legal remedies.
- Organize dating violence awareness training for all faculty and staff.
- Collaborate with a local battered women's program to provide preventive education for junior high and high school students as part of the school's comprehensive health education program.
- Organize a peer education and support program, where youth are trained to reach out to classmates at risk for violence.
- Provide on-site support groups for victims of dating violence; advocate with local batterers' treatment programs to develop groups for abusive adolescents.
- Inform parents of warning signs and community resources for abused or abusive youth.

SUGGESTED ACTIVITIES

- Conduct a school-wide survey of student dating violence experiences and attitudes.
- Post flyers of local battered women's hotlines in girls' bathrooms and other places.
- Organize a group of students to walk in the annual Jane Doe Safety Fund Walk for Women's Safety, organized by the Massachusetts Coalition of Battered Women's Service Groups every October.
- Organize workshops on dating violence for students, parents, and staff during Domestic Violence Awareness Month.

RESOURCES: Dating Violence Intervention Project and curricula, *Preventing Teen Dating Violence*, *Dating Violence: Young Women in Danger*, *Identifying and Treating Battered Adult and Adolescent Women and Their Children: A Guide for Health Care Providers*, *Preventing Family Violence: A Curriculum for Adolescents*, *Skills for Violence-Free Relationships*, "When Love Hurts" and "The Power to Choose" (videos)

SPECIAL NOTE: October is Domestic Violence Awareness Month nationwide.



EXHIBIT 13-5 FACT SHEET

Sexual Assault

Sexual assault is violence and violation acted out by sexual means. Rape and other sexual assaults are serious violent crimes that have devastating, long-term effects on the lives and health of survivors. Sexual assault occurs in all racial, ethnic, religious and socioeconomic groups as well as in the heterosexual, gay and lesbian communities. The following are facts collected by rape crisis centers in Massachusetts.

- The overwhelming majority of all reported sexual assaults were perpetrated by someone known to the survivor. Data collected by rape crisis centers shows that less than 20% of the attackers were strangers to their victims.
- Most sexual assaults occurred in a home setting.
- Half of the survivors were under 18 years of age at the time the sexual assault occurred; one quarter were under 13 years of age.
- Most survivors did not report the assault to police or to a health care provider.

Sexual assault is both a personal crisis and a social problem. Efforts dealing with sexual assault must, therefore, work on two levels. The first must address the need for sensitive, timely and appropriate services for survivors and their families. The second must address the need for preventive education, increased community awareness about the realities of sexual assault and the need to change social problems that create a climate where sexual violence can flourish.

SCHOOL AND COMMUNITY GOALS

- Require all school nurses, health teachers, counselors and principals to receive training on issues of sexual assault, and offer such training to all teachers and staff.
- Help all schools respond to sexual assault in a consistent, sensitive manner by establishing a PreK-12 protocol. The protocol should cover all issues of sexual assault and sexual harassment, including reporting requirements, handling disclosure, referrals for services, and confidentiality.
- Contact the rape crisis center and the battered women's program that serve your community to learn about services offered by each.
- Incorporate age-appropriate information on sexual assault into comprehensive health education programs and school-based health center intake forms. Information should include: students diverse cultures, ethnicities, economic situations, religious beliefs and sexual orientations.
- Increase awareness of rape crisis center services by posting information in key locations such as bathrooms, locker rooms, and administrative, counseling and school health offices.
- Set up on-site or off-site counseling groups for sexual assault survivors. Maintain up-to-date information on counseling services for adults, adolescents and children. Provide this information to employee assistance programs and teachers unions.

SUGGESTED ACTIVITIES

Invite counselors from local rape crisis centers to speak to parents and faculty about such topics as preventing sexual assault of children and adolescents, and invite counselors into classrooms to speak directly with students. Staff and students could also organize a group to participate in the Jane Doe Safety Walk or a local "Take Back the Night" march.

RESOURCES: *Shattering the Myths: Sexual Assault in Massachusetts 1985-1987*, Preventing Family Violence: A Curriculum for Adolescents, Massachusetts Department of Public Health

FOR MORE INFORMATION

Massachusetts Coalition of Rape Crisis Services
Worcester Rape Crisis Center
100 Grove Street
Worcester, MA 01605

Phone: (508) 791-9505



CHAPTER 13

EXHIBIT 13-6 FACT SHEET

Playground Safety

Playgrounds provide important opportunities for children learning to explore their environments, develop skills for play and gain confidence. Yet playgrounds may present unnecessary hazards that could have a devastating impact on a child. In 1991, over 200,000 children in the United States required emergency department (ED) treatment for playground injuries. In a 1988 Department of Public Health study, over 51% of all children injured on Massachusetts playgrounds were treated by a school nurse, compared to 21% who required ED care. *Children moving into new play spaces, (typically at ages 3 and 6) are at highest risk.*

SCHOOL AND COMMUNITY GOALS

The most critical areas to address are:

- **SURFACE** Impact-absorbing materials can reduce injury risk; never use cement, grass, asphalt, or dirt under equipment.
- **MAINTENANCE** Follow manufacturer's instructions and recommended inspection schedule.
- **SUPERVISION** Remove visual barriers, position adults for optimum view, consider rules and policies regarding clothing, restrictions and safe play to be shared with students and parents.
- **SPACING** Children should be able to move safely from one activity to another through proper spacing between equipment and other structures.
- Schools, parents and other organizations (eg; town's Parks and Recreation Department) should work collaboratively to address playground improvements utilizing U.S. Consumer Product Safety Commission (CPSC) guidelines.

SUGGESTED ACTIVITIES

Although replacing playground equipment can be costly, not replacing unsafe equipment can be very expensive in terms of liability. One recommendation is to arrange a purchasing and replacement schedule that weighs equipment durability and safety with available funds. School personnel should record playground injuries including the equipment involved. This will allow for assessing equipment or play behavior that is frequently associated with injuries, and develop a system for regular maintenance as well as a plan for equipment repair, replacement and/or removal.

RESOURCES: Local Parks and Recreation Departments, CPSC *Handbook for Public Playground Safety*, Playground Safety Packet from the Injury Prevention Resource Center, Videos: *The Swing That Swung Back*, *I'm No Fool with Safety*, *I'm No Fool Having Fun*

SPECIAL NOTE: The Americans with Disabilities Act (ADA) requires that any new or renovated playground should provide access for children with disabilities.

FOR MORE INFORMATION

Injury Prevention and Control Program
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Mass. Department of Public Health
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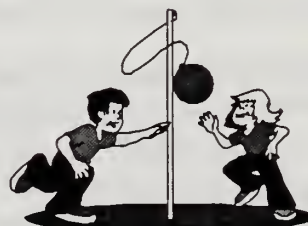




EXHIBIT 13-7 FACT SHEET

Pedestrian Safety

As growing children with increased responsibility for getting to school and play areas on their own, children ages 5-9 are most likely to be injured as pedestrians. Contributing to their vulnerability are their inability to judge the speed and distance of oncoming cars, small size, narrow field of vision, poor impulse control and difficulty judging the direction of sounds. In Massachusetts, 1 in 470 children is injured as a pedestrian each year. The likelihood of hitting a child pedestrian is higher when the motorist is returning home from work. Most child pedestrian injuries occur between 3:00 and 5:00 PM. Six year-olds in Massachusetts are particularly vulnerable. Twice as many boys are injured than girls. For K-3 most injuries occur by running into the street mid-block, while older children are most often injured at intersections.

SCHOOL AND COMMUNITY GOALS

- Help students understand pedestrian hazards and how to avoid them.
- Demonstrate and practice with students safe street crossing.
- Teach traffic signs and signals, and safe walking zones.
- Promote the use of retro-reflective clothing and accessories when walking in the dark.
- Develop pedestrian policies for the school community.
- Create pedestrian crossing areas safe from bus and auto traffic.
- Encourage parent participation in teaching and reinforcing safe pedestrian behaviors.
- Promote involvement of municipal and community agencies in creating safe walking policies, safe walking areas and enforcing pedestrian-related traffic laws.

SUGGESTED ACTIVITIES

Teach pedestrian safety in the classroom at the beginning of each year. Role modeling of safe pedestrian behaviors by school personnel is recommended to reinforce positive behaviors among children. Sponsor health and safety events for children and parents involving police, EMS, Scouts, and Boys and Girls Clubs. Some communities use "Safety Town" activities to teach safe pedestrian behaviors. One police officer started a local cable television show, Officer Dave's Safety Club, which features the officer teaching children in his community about safety in fun, creative ways. Teachers can use walking field trips as opportunities to model safe street crossing.

RESOURCES: Safety officers, curricula, videos, activity books, games, SAFESCHOOL, SAFE KIDS Traffic Safety Magazine, AAA, National Safety Council's Child Safety Club, Channing Bete, catalogs of retro-reflective items.

SPECIAL NOTE: In Massachusetts, the pedestrian traffic law requires motorists to yield for a pedestrian in a marked crosswalk if a traffic control signal does not exist or if an existing one is not operational.

FOR MORE INFORMATION

Injury Prevention and Control Program
Bureau of Family & Community Health
Mass. Department of Public Health
150 Tremont Street
Boston, MA 02111
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CHAPTER 13

EXHIBIT 13-8 FACT SHEET

Bicycle Safety

Bicycle safety - including the promotion of bike helmet use by children - is one of the fastest growing areas of activity among injury professionals as well as an increasing concern among parents. Most bike-related deaths result from head injury. Approved bike helmets (ANSI or SNELL) can reduce head injury by 85%, yet only 2-5% of children wear them. Males are five times more likely to be killed as bicyclists than girls; school-age youth 5-17 account for more than half of all bike-related deaths. Although most fatal injuries involve bike/vehicle collisions, most bike injuries don't involve cars at all.

SCHOOL AND COMMUNITY GOALS

- Teach bike safety in the classroom.
- Encourage the purchase and wearing of bike helmets.
- Develop policy requiring helmet use for students riding to school.
- Model good bicycling behaviors for bicycling staff.
- Work with interested parents, service or other groups to organize bulk discount helmet promotion. (\$14 per helmet)

SUGGESTED ACTIVITIES

Utilize safety officers or other bike safety advocates in classroom education; sponsor bike hikes (with mandatory helmet use) after completion of bike safety curriculum. Incorporate bike helmet impact simulation experiments into science curricula and bike safety into poster or writing contests. Organize bike rodeos. Invite local retailers to provide incentives (coupons for bowling or ice cream) to children observed wearing helmets. One school organized an after-school historical bike tour for student cyclists. Others have used older students to help run on-bike classes for younger kids. One school helps recycle used bike helmets in good condition to give to students who need them.

RESOURCES: Local safety officers, Massachusetts Head Injury Association, local bike retailers and bicycling clubs, *The Basics of Bicycling* curricula, *Bicycle Safety Camp* and *Be Safe On Your Bike* videos, SAFE KIDS Traffic Safety Magazine, discount helmet promotions available through distributors, Bicycle Safety Jeopardy! game, Bike Safety Packet (includes the Massachusetts Bike Safety Contact List and Idea Bank) available from the Injury Prevention Resource Center.

SPECIAL NOTE: May is Bicycle Safety Month, October is Head Injury Awareness Month, Massachusetts law now requires that a helmet be worn by persons 12 years of age and under who are operators or passengers on a bicycle. The law does not apply on private property.

FOR MORE INFORMATION

Injury Prevention and Control Program
Bureau of Family & Community Health
Mass. Department of Public Health
150 Tremont Street
Boston, MA 02111
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EXHIBIT 13-9 FACT SHEET

Fire and Burn Safety

Fire and burn injuries and deaths are not a high-risk issue for school age children. However, teaching fire safety behaviors to young children as well as older children with self-care and child-care responsibilities can be a family life-saving measure. Despite Massachusetts smoke detector laws, many fatal fires occur in residences in which smoke detectors are missing or non-functioning. Smoke detectors can provide a life-saving warning should a house fire occur. *Persons living in older housing stock are at especially high risk.*

SCHOOL AND COMMUNITY GOALS

- Teach children: "STOP, DROP, ROLL & COOL".
- Teach children fire exiting procedures.
- Teach children how to access emergency help.
- Teach children basic home fire prevention practices; encourage family involvement through take-home activities.
- Refer students with fire setting behavior (as appropriate according to school policy) to appropriate services immediately.

SUGGESTED ACTIVITIES

Provide fire safety instruction (utilizing speakers, curricula, videos, hands-on activities, take-home checklists or reminders); incorporate information into other subject areas. Organize health and safety fairs and poster or writing contests. Practice fire drills in school settings and simulate home fire exits. Have students "crawl low" under a sheet held to simulate level of good air during a fire. Have students practice STOP, DROP, ROLL, COOL while extinguishing "felt flames" taped to their clothes.

RESOURCES: Local fire prevention officers, Office of the State Fire Marshal, nurse educators with hospital burn units, *Learn Not To Burn* curricula, videos, handouts, SAFE KIDS Fire Safety Magazines, "Fire Safe House" or "Pluggie - The Fire Plug" demonstration items if locally available, Fall River Fire Fighters Memorial Museum, Inc. (Juvenile Firesetters Program)

SPECIAL NOTE: National Fire Prevention Week is the first week in October; Burn Awareness Week is the second week in February. Mass. law requires schools to meet fire drill regulations according to 527 Code Massachusetts Regulation (CMR) 10.09.

FOR MORE INFORMATION

Injury Prevention and Control Program
Bureau of Family & Community Health
Mass. Department of Public Health
150 Tremont Street, 3rd floor
Boston, MA 02111
PHONE: (617) 727-1246 FAX: (617) 727-6088





CHAPTER 13

EXHIBIT 13-10 FACT SHEET

Motor Vehicle Occupant Protection

While motor vehicle crashes are the leading cause of disabling injury and death for people ages 1 to 34, the use of safety belts is proven to significantly reduce this risk.

Massachusetts law requires all people over age 12 to wear a safety belt, and children age 12 and under to be restrained in either a safety belt or child safety seat. Despite the Massachusetts law, restraint use drops from 71% for ages 5 and under to 34% for children 6-15. Nine children (ages 6-15) are injured daily as motor vehicle passengers in Massachusetts. *Ages 5-9 are at highest risk for pedestrian and motor vehicle occupant injuries, together accounting for 40% of deaths. Ages 10-14 are at highest risk for bicycle-motor vehicle collisions. Ages 15-19 are at highest risk as occupants and drivers; alcohol and speed often are factors.*

SCHOOL AND COMMUNITY GOALS

- Age-appropriate instruction in passenger safety at all levels.
- Develop school policies that reinforce Massachusetts law.
- Serve as positive role models.
- Provide educational materials to parents.
- Encourage students to buckle up on every ride and remind family and friends to buckle-up also.
- Work with local law enforcement and community groups to increase compliance with the law.
- Promote referrals to Buckle-Up Hotline within community.

SUGGESTED ACTIVITIES

Provide occupant protection instruction (utilizing curricula, speakers, videos, hands-on activities); incorporate information into other subject areas. Post signs in parking lots, organize health and safety fairs and poster or writing contests. Local schools have sponsored prom-time simulated car crash events, alcohol-free graduation parties, hosted Convincer demonstrations and organized testimony by elementary school students at public hearings on safety belt legislation.

RESOURCES: Local safety officers, Governor's Highway Safety Bureau, Emergency Nurses C.A.R.E. (Cancel Alcohol Related Emergencies), Regional Occupant Protection Coordinators, Students Against Drunk Driving (SADD), curricula, videos, Massachusetts Child Passenger Safety Law handout, Buckle-Up Hotline handout, stickers, Safety Jeopardy! game, Buckle Bear and Vince and Larry crash test dummies available through the Injury Prevention Resource Center

SPECIAL NOTE: National Child Passenger Safety Awareness Week is in February; the last week of May is Buckle-Up America Week.

FOR MORE INFORMATION

Injury Prevention and Control Program
Bureau of Family & Community Health
Mass. Department of Public Health
150 Tremont Street, 3rd floor
Boston, MA 02111
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EXHIBIT 13-11 FACT SHEET

School Bus Safety

Over half a million Massachusetts students are transported by school buses annually. School buses are a relatively safe form of transportation and are associated with few injuries and deaths. Children ages 4-7 are at highest risk of injury with two-thirds of the deaths occurring from children getting on or off the school bus.

SCHOOL AND COMMUNITY GOALS

- Educate children and parents on safe bus-riding behaviors.
- Reinforce safe behaviors on field trips
- Develop appropriate bus pick-up/drop-off policies.
- Conduct bus evacuation drills per Massachusetts law.
- Work with local traffic enforcement officer to ensure adherence to bus-related traffic laws.

SUGGESTED ACTIVITIES

Utilize curricula, A-V and age-appropriate student handouts, (crosswords, coloring sheets, posters) to teach and reinforce safe behaviors. Send take-home information to parents for family reinforcement. Teachers with younger children may wish to use props such as miniature traffic signs to engage children in bus safety activities.

RESOURCES: Safety officers, *Us in a Bus* curriculum, *Thinking About School Bus Safety* film, *Otto the Auto* series of videos, *Pooh's Great School Bus Adventure* video, handouts for children and parents

SPECIAL NOTE: Anyone interested in safety belts on school buses can address the issue on the district level; over twenty communities have developed local policies and regulations regarding safety belts on school buses. National School Bus Safety Week is the third week in October.

TRANSPORTATION LAWS: All pupils shall receive classroom instruction in school bus safety three times a year; during the first week of the school year, again before January 1, and at the end of the school year. Instruction will be according to the safety program prescribed by the Massachusetts Board of Education, and all pupils shall participate at least twice during the school year in on-bus emergency evacuation drills. (MGL c.90 s.7B) Students and drivers of 7D vehicles (school transportation vans, and station wagons carrying not more than 8 students) are required to wear safety belts while transported in those vehicles. School bus drivers must wear safety belts when actually transporting students. The fine for illegally passing a school bus is a maximum of \$200. Repeat offenders may have their licenses suspended. If a community chooses to require safety belt installation in their school buses, the restraint system must comply with federal safety standards.

FOR MORE INFORMATION

Injury Prevention and Control Program
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CHAPTER 13

EXHIBIT 13-12 FACT SHEET

Sports Safety

Organized sports are a vital part of the lives of school age children and teens. The number of different sports supported by cities and towns, junior high and senior high schools has increased significantly. Sports are the most frequent cause of injuries for both male and female adolescents. Although the vast majority of these injuries will be minor, some will be quite severe or cause chronic health conditions. One in four Massachusetts teens will be seen annually in the emergency department or admitted to the hospital for a sports-related injury. Seventeen percent of all hospital treated injuries of 0-19 year olds are sports related. Twice as many male adolescents as females are involved in sports-related injuries. Team sports are the most frequent cause of sports injury, individual sports the most severe.

SCHOOL AND COMMUNITY GOALS

- Require coaches to be trained and certified in each sport they coach.
- Require pre-participation physicals for all athletes.
- Require, maintain and improve protective equipment.
- Collect and maintain injury data from all practices and games.
- Maintain and improve the surfaces of public playing fields.
- Inform parents and athletes of specific risks and protective strategies.
- Require helmets and mouthguards for contact sports.
- Use community resources to develop clinics that assist athletes and coaches with training and conditioning.

SUGGESTED ACTIVITIES

Athletic trainers, coaches, instructors, and school nurses should share their injury reports, analyze the results and identify local injury patterns. Parents and administrators should advocate and enforce association rules that promote safety. Schools should provide athletic trainers or medical personnel at all events and practices.

Athletic departments can host a "Sports Night", an evening when parents and athletes are informed of the various athletic opportunities, introduced to staff, review the causes and nature of injuries associated with specific sports, how to ensure a proper fit of protective equipment and other strategies for preventing injuries.

RESOURCES: *Bay State Youth Sports Guide*, *Sports Injury Prevention and Treatment Among Massachusetts Interscholastic Athletic Programs: A Status Report, Taking Action!*, Resource List of Massachusetts Sports Injury Prevention Agencies, Youth Sports Injuries Fact Sheet, American Academy of Pediatric Dentistry position statement, statement of safer baseballs, sports injury prevention packet

SPECIAL NOTE: April is National Youth Sports Injury Prevention Month and Sports Eye Safety Month; October is Head Injury Awareness Month.

FOR MORE INFORMATION

Injury Prevention and Control Program
Bureau of Family & Community Health
Mass. Department of Public Health
150 Tremont Street
Boston, MA 02111
PHONE: (617) 727-1246 FAX: (617) 727-6088

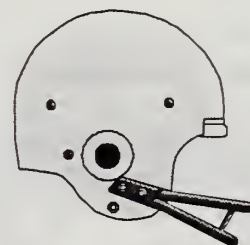




EXHIBIT 13-13 FACT SHEET

Teens At Work

Large numbers of teens are working afternoons, evenings, weekends and summers. Recent Massachusetts census data indicate that an estimated 71% of 16 and 17 year olds work an average of 22 hours per week and 27 weeks per year. A 1993 Massachusetts study found that work-related injuries constitute a significant proportion of all injuries to teens. These injuries range from grease burns in restaurant kitchens, to back injuries lifting patients in nursing homes, to amputations from working on machines.

As adolescents begin to explore the adult world of work, now is the time to develop important "detective" skills needed to recognize the potential job hazards that exist in all types of work. Equally important is learning about their rights and responsibilities to a safe and healthful workplace. Guiding adolescents and parents toward choosing a safe and meaningful working experience that does not detract from school should be a goal of Massachusetts schools and communities.

SCHOOL AND COMMUNITY GOALS

- Provide teachers, staff, parents, and teens with education about choosing appropriate and safe work.
- Assure schools have the necessary training to responsibly issue work permits as required under the state child labor laws.
- Provide training to teachers, staff and students on recognizing and preventing job hazards and on rights under the child labor and workplace health and safety laws.
- Report cases of injuries to working teens immediately to the Department of Public Health's Occupational Health Surveillance Program.
- Work with employers of teens to assure compliance with child labor laws and a safe and healthful workplace for all employees.

SUGGESTED ACTIVITIES

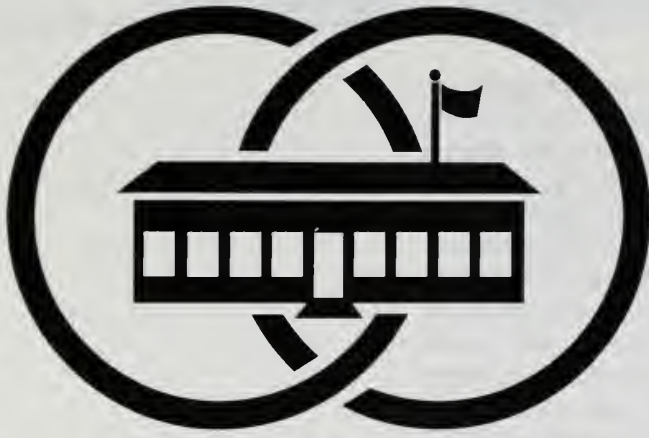
Students interview relatives about the kind of work they do/did and whether they or others in the family have ever experienced a work-related illness or injury. Review cases of real injuries among working teens and brainstorm causes of the injuries as well as steps for preventing similar injuries from occurring to others. Disseminate basic information on child labor laws and health and safety regulations to students, parents, teachers and staff. Either while on field trips to real workplaces or while viewing slides of different workplaces, use a checklist to identify potential job hazards. Develop role plays or skits that present situations where students explore how to handle potentially hazardous conditions at work or to recognize violations of the child labor laws.

RESOURCES: The Occupational Health Surveillance Program and the Injury Prevention and Control Program staff at the Department of Public Health, the child labor investigative staff at the Attorney General's office, the staff responsible for issuing work permits at the Massachusetts Department of Labor and Industries, and the Massachusetts Coalition on Occupational Safety and Health.

FOR MORE INFORMATION

Occupational Health Surveillance Program
Mass. Department of Public Health
150 Tremont Street, 8th Floor
Boston, MA 02111
Phone: (617) 727-2735





Chapter 14

ALCOHOL, TOBACCO, AND OTHER DRUGS

Components of a School-based Prevention Program

Alcohol and Other Drug Use and Abuse

Tobacco Use and Abuse



Chapter 10



Substance abuse and tobacco use are critical issues about which our schools need to be proactive. Problems with alcohol and other drugs cause pervasive damage in every segment of our society and have no age, race, ethnic, or gender boundaries. Alcohol and other drug problems in youth are associated with difficulties such as disrupted childhoods and stressful relationships with family and friends. They are also the cause of preventable injuries and disease. If untreated, alcohol and other drug problems continue into adulthood, becoming more severe and complicated and having increasingly negative consequences for one's life. Therefore, establishing an effective and comprehensive alcohol, tobacco, and other drug (ATOD) prevention program in schools is a top priority.

COMPONENTS OF A SCHOOL-BASED PREVENTION PROGRAM

An effective substance abuse prevention program is part of a comprehensive health promotion plan that links alcohol and other drug issues with prevention of tobacco use, violence, unintended pregnancy, and HIV/AIDS. An ATOD prevention program has the following key components:

Policy: An ATOD policy states the school's goals and plan of action for preventing and responding to ATOD problems. It also establishes a process to regularly reexamine the climate of the school to identify and reduce risk factors that contribute to ATOD and to enhance factors that increase student resiliency and prevent use. The policy recognizes the relationship between the school, community, and home.

Curriculum: A planned, sequential, developmentally appropriate, and culturally sensitive comprehensive health education pre-K to 12 curriculum is designed to influence students' knowledge, attitudes, and behavior related to alcohol, tobacco, and other drugs, and promote support for students in need of additional help and services. Such a curriculum reinforces the promotion of healthy choices, and, through skill-training, reduces the risks of a wide range of health problems that can affect students.

Identification, support and referral system: The system provides the necessary link between the instructional functions of the school and its guidance, counseling, and human service delivery programs. It consists of a team of educational and human service professionals whose purpose is to identify and refer students, to provide ongoing case management, and to recommend policy and program changes that improve school climate and educational and support services for students. Its primary goal is early intervention. These programs are sometimes called "intervention" or "student assistance programs." In some cases, counseling and treatment groups are provided on-site by in-house counselors or community agen-



cies, who may also provide support groups for youth in recovery from alcoholism and/or drug addiction and children of alcoholic or drug-addicted parents.

Professional Development: Professional development activities provide guidance to teachers delivering instruction, are coordinated with staff development in other curricular areas, reflect a commitment to the overall goals of the school, include all members of the school community, provide opportunities for staff to reflect and plan for a healthier school that promotes positive interpersonal relationships, and provide opportunities to develop skills as team members. In order to be effective, training requires systemwide support.

The three components of in-service training are *awareness*: personal awareness and readiness to teach about alcohol, tobacco, other drugs, and related issues such as AIDS; *information*: understanding of alcohol, tobacco, other drugs, and AIDS, school policies and procedures, school and community prevention efforts, intervention strategies, and treatment services; and *skills*: ability to facilitate behavioral skills training in classroom settings, discuss issues and implement lesson plans and materials, and the ability to work with parents and children effectively.

Peer education/leadership: Peer leaders can participate in prevention activities, provide one-on-one support of other students, and present educational sessions for students, parents, or school committees and community service projects. Peer leaders can develop skills in helping other students who are experiencing difficulty, including problems with alcohol, tobacco, and other drugs, AIDS, safety, conflict resolution, depression, divorce, suicide, dating and sexuality, eating disorders, gay and lesbian issues, and multicultural issues. Essential steps in conducting peer leader programs are identifying, recruiting, and selecting peer advisors, providing peer leadership training and support, and ensuring program implementation and follow-up.

Community collaboration: The school solicits assistance from the community to provide organizational and financial support for improved and increased school-based prevention programs. This would include the school-community task force that addresses such issues as availability of community treatment and prevention resources, as well as alcohol and tobacco products (e.g., vending machine policies). Media-based programs help promote abstinence and abuse prevention practices by spreading



messages about non-use. Such programs can be based on a particular theme, such as a certain drug, or issues like drinking and driving. Media strategies include radio ads, programs, and talk shows, television, films, ads, articles and ads in local newspapers, letters to the editor, posters and fliers distributed through community businesses, civic organizations, and religious organizations.

Family education: Parents, guardians, and extended family members can play a valuable and central role in preventing ATOD use and related problems. They can reinforce the school program at home and can provide support to the program in the community. In cases where family members are abusing ATOD, education programs which include identification of community resources should be offered.

Systemic school change and restructuring efforts: The way a school is organized influences student behavior and attitudes toward substance use and abuse. Schools that have the following program elements have proven effective in reducing substance abuse:

- fostering of positive and supportive adult-student relationships
- fostering positive peer relationships
- creating appropriate and high expectations for all students
- emphasizing student involvement in decision making (in school governance, instruction on social skills, cooperative problem solving)
- promoting a school climate that respects and celebrates cultural differences
- providing information regarding resources available for addiction, and staff support for those involved in these programs

Evaluation: ATOD evaluation measures the impact of the prevention efforts and helps maintain school committee and community support. Evaluations may measure changes in student knowledge and attitudes concerning alcohol, tobacco, and other drugs, the degree to which a school's goals are met in any given period of time, and changes in knowledge, attitude, and behavior of the adults working in the school community. Evaluation results are the most important documents a school can use to solicit community support for the continuation or expansion of a program.



Why Prevention Works

A community-wide prevention program involving schools can be a highly effective prevention technique. Primary prevention programs include mass media programming, a school-based educational program for teachers and youth, peer leadership programs, parent education and organization, community organization, and health policy components. Analysis of one prevention model showed that the use of tobacco, alcohol and marijuana in the participating community was significantly lower than in a nonparticipating community; the net increase in drug use was half that of the nonparticipating community.

The Massachusetts Department of Public Health (MDPH) supports nearly 48 community-based programs for youth. These primary prevention programs offer one or more of these models: youth development, student assistance, court diversion, and street outreach. The programs seek to create systemic change and to increase the resiliency of youth while decreasing their risk factors. Strategies include skill building, peer leadership, creating opportunities for youth-adult collaboration, outreach, and referrals for supportive services.

Studies of school-based substance abuse prevention programs yield the following recommendations:

- Programs that increase students knowledge about the dangers of substance abuse must be complemented by activities designed to teach skills to resist negative social influences, and increase decision making, risk analysis, stress management, and coping skills, as well as sensitivity to different life-styles and cultures. Role playing is one effective method of imparting and practicing these skills.
- Approaches using peer leadership combined with peer-to-peer and teacher instruction are most effective. Peer leaders not only provide information in a way other students can relate to but are themselves examples of empowered youth with a sense of pride and self-worth.
- An effective component of a substance abuse program is looking at the impact of advertising and media, to raise student awareness of how advertising and entertainment glamorize the use of harmful substances and rarely show negative consequences.
- Student confidentiality must be respected; breach of confidentiality may prevent youth from seeking assistance or may skew reporting of behaviors when programs are evaluated for effectiveness.
- Programs should be culturally and linguistically sensitive and appropriate and should provide for youth with disabilities, gay and lesbian youth, and other students with special needs.



- One school program showed that a take-home curriculum about substance abuse prevention was more effective in changing students' perceptions of peer use because it increased parent-student communication about drugs and resisting peer pressure.
- Early intervention is effective when substance abuse is suspected. School personnel can be trained to look for indicators of high-risk behavior and make referrals.
- Although some youth at risk become abusers, many do not. Programs can foster resiliency and build on the protective factors that shield some youth from participating in high-risk behaviors. Examples of programs that enhance protective factors are drug- and alcohol-free alternative recreational activities and mentoring and community service learning activities.

ALCOHOL AND OTHER DRUG USE AND ABUSE

The MDPH recognizes the crucial role that school personnel play in preventing the use of harmful substances by school-aged youth. Harmful substances include, but are not limited to, alcohol (beer, wine, wine coolers, hard liquor), marijuana, hashish, cocaine, crack cocaine, steroids, inhalants (glue, aerosols, nitrous oxide), psychedelics (LSD, mescaline, PCP), amphetamines (speed, uppers, Dexedrine), barbiturates, tranquilizers, narcotics (heroin, opium, morphine, Demerol, Percodan), and over-the-counter drugs. The abuse of alcohol and other drugs may be linked to other public health problems, such as unplanned pregnancy, violence, and HIV/AIDS. Use of one drug can be a gateway to additional drug use and abuse. Tobacco, too, is a powerful drug that may serve as a precursor to other drug abuse. Tobacco use and abuse are discussed later in this chapter. See Exhibit 14-1 for commonly used and abused drugs.

The use of alcohol and other drugs is strictly forbidden on school grounds, according to a United States Department of Education regulation and the Drug-Free Schools Certification regulations, as well as numerous state and local ordinances.

The Massachusetts Interscholastic Athletic Association (MIAA) treats alcohol and other illicit drugs as it does tobacco. Rule 14 of the MIAA requires that during the season of practice or play, a student shall not, regardless of the quantity, use or consume, possess, buy/sell, or give away any tobacco products, any beverage containing alcohol, marijuana, steroids, or any controlled substance except those specifically prescribed for the student's own use by his or her physician. An athlete violating this rule is not allowed to play in the next two consecutive interscholastic events. For subsequent violations, penalties are greater.



Prevalence of Alcohol and Other Drug Use Among Children and Adolescents

Nationally

The *Monitoring the Future Survey* (also known as the National High School Senior Survey on Drug Abuse) surveyed students in public and private schools nationwide in 1993. This survey represents the substance abuse behavior of U.S. seniors only and does not include out-of-school youth who represent up to 25% of the high school senior age group. *Monitoring the Future*, nevertheless, is a good indicator of current trends of school-attending adolescents:

- Between 1992 and 1993, drug use significantly increased among high school students. In 1992, 40.7% of the graduating class said they had used an illicit drug at least once, way down from a peak of 65.6% reported by the class of 1981. The 1993 increase to 42.9% represents a reversal of that downward trend.
- The number of high school seniors *currently* using drugs also increased in 1993. Seniors reported using an illicit drug within the month before the survey in 18.3% of cases, up from 14.4% in 1992. The percentage of seniors having used illicit drugs within the previous year increased from 27.1% to 31.0%.
- Lifetime marijuana use among seniors previously decreased from 36.7% in 1991 to 32.6% in 1992, but increased again to 35.3% in 1993. Current marijuana use in the 30 days prior to the survey, which had decreased between 1991 and 1992 from 13.8% to 11.9%, increased again to 15.5% in 1993. The number of seniors using marijuana within the year prior to the survey also increased from 21.9% in 1992 to 26.0% in 1993. Marijuana use among tenth graders increased to 19.2% in 1993. Among eighth graders, lifetime use of marijuana increased from 10.2% in 1991 to 11.2% in 1992, and again to 12.6% in 1993.
- LSD use among seniors within the year prior to the survey increased to nearly the levels of the peak years during the mid 1970s; in 1993 it increased to 6.8%, up from 5.6% in 1992. The percentage of seniors having tried LSD at least once increased from 8.6% in 1992 to 10.3% in 1993.
- Alcohol is the most abused drug. By the time students finish high school, virtually all have tried alcohol at least once. More than 27.9% of seniors, 21.1% of tenth graders, and 13.4% of eighth graders reported binge drinking (five or more drinks in a row) within the 2 weeks prior to the survey in 1992. In 1993 the figure for heavy drinking increased to 23.0% for tenth graders but remained fairly constant for eighth and twelfth graders. High school seniors reporting daily use of alcohol decreased from 3.4% in 1992 to 2.5% in 1993.
- Use of inhalants (glues, solvents, and aerosols), which is more prevalent in the earlier grade levels,



rose in 1993 across all grade levels surveyed. Eleven percent of eighth graders had used an inhalant within the last year, 8% of tenth graders, and 7% of seniors. In contrast to other drugs, the percentage of seniors reporting inhalant use has steadily risen since the 1970's.

- Cigarette smoking is rising in the adolescent population, in contrast to nationwide trends. The rate of daily smoking in 1993 increased from 7% to 8% among eighth graders, 12% to 14% among tenth graders, and 17% to 19% among seniors.
- Additional research has reported that some 250,000 U.S. high school seniors have used anabolic steroids, and the rate of use is increasing. One study of 1,813 adolescents showed that 4.2% had used steroids in 1992; the more frequently these students used steroids, the more likely they were to use one or more other drugs.
- In 1993, there was a consistent decrease in the percentage of students who considered the use of most drugs, including crack cocaine, to be dangerous. Additionally, seniors said it was easy to get LSD and MDMA (ecstasy), although the perceived availability of cocaine decreased.

Massachusetts

The 1993 Massachusetts Youth Risk Behavior Survey (1994) collected data from students in public secondary schools in the state. The findings on substance use patterns appear comparable to those found in the 1990 Massachusetts survey.

- Nearly 47% of students surveyed reported using alcohol in the last month.
- Nearly 28% of students surveyed reported having five or more drinks of alcohol in a row on one or more occasions in the last month.
- Twenty-three percent of high school seniors surveyed reported driving after drinking during the last month.
- One in five, or 20%, students surveyed reported using marijuana in the last month.
- Two and a half percent of students surveyed reported using cocaine in the last month.

The 1994 prevalence study of alcohol and other drug use among seventh through twelfth grade students in Massachusetts conducted for the Massachusetts Bureau of Substance Abuse Services by Health and Addictions Research showed that:

- Eight of ten (81%) students surveyed in grades 7-12 reported using alcohol at least once in their lifetime and four in ten (42%) reported current use.



- In 1993, one half (51%) of the 9th through 12th grade students surveyed and one third (36%) of the 7th and 8th graders reported using one or more drugs other than alcohol or tobacco in their lifetime.
- Lifetime and current use of marijuana, inhalants, and amphetamines increased for adolescents surveyed in grades 7-12. The overall lifetime prevalence of other drug use was higher in 1993 (46%) than in 1990 (38%).
- Current use of other drugs was 24% in 1993 compared to 15% in 1990.
- For students surveyed in grades 9-12, lifetime (85%) and current (49%) alcohol use remained close to 1990 levels.
- Lifetime use of alcohol among students surveyed in grades 7-8 increased from 58% in 1990 to 74% in 1993. Current use rose from 20% to 28%.
- Overall, a greater proportion of males surveyed reported lifetime and current drinking than females, especially in the lower grades.
- Student reports of driving after drinking increased from 22% in 1990 to 27% in 1993.
- Heavy drinking (more than five drinks in a row in the last two weeks) increased dramatically by grade. While 12% of 7th graders surveyed reported heavy drinking, 37% of high school seniors did so. Much of this drinking occurred at parties.
- Although alcohol use is illegal for individuals less than 21 years of age, two thirds (67%) of students in grades 9-12 said they intend to use alcohol within the next year, while 41% of students in grades 7-8 said this.

The MDPH conducts triennial studies of alcohol, tobacco, and drug use among secondary school students in Massachusetts. The Bureau of Substance Abuse Services can provide an update on statistics.

Detrimental Health Effects

Alcohol and other drug use is closely associated with a number of other health issues: HIV/AIDS and sexually transmitted diseases, unplanned pregnancy, automobile collisions, and school failure. Many violent acts (including sexual assault) are related to substance abuse.

Alcohol abuse can lead to cirrhosis of the liver and stomach cancer. Alcohol is implicated in drunk driving injuries and fatalities, poor school functioning, family problems, and depression.

Frequent users of marijuana may develop respiratory problems, impaired psychological functioning, impaired driving ability, loss of short-term memory, adverse reproductive effects, and vulnerability to other drugs.



Those at Risk of Developing an Alcohol or Drug Problem

Cocaine abusers may suffer in the short term from loss of sleep, chronic fatigue, dry mouth, night sweats, headache, nose bleeds, nasal passage irritation, feelings of depression, and suicidal thoughts. Long-term abusers may develop hepatitis, rhinitis (ulcerated nasal septum), convulsions, depression, anxiety, drug dependence, and legal, social, and financial problems.

Anabolic steroids, used to enhance muscle size and improve strength and endurance, can cause hair loss in males, excessive hair growth in females, testicular atrophy, liver tumors, and heart disease. Steroid users are at risk for HIV/AIDS if they share contaminated needles.

Multiple-substance abusers are at risk of a host of serious problems, such as suspension or expulsion from school, chronic depression and fatigue, reduced job and family stability, motor vehicle collisions, HIV/AIDS, and involvement in illegal activities and violent crimes.

Although all youth are potentially at risk for substance abuse, those with low expectations for education, low school achievement in junior high, school truancy and misconduct records, low resistance to peer influence and peer use of substance, lack of belief that use is harmful, and lack of parental support are most at risk. Other groups at risk include youth from families of substance abusers, youth with physical disabilities, who may drink or take drugs as a way of coping with feelings of isolation and differentness, gay and lesbian youth, who may turn to substances as a way of fitting in, and refugee or immigrant youth, trying to cope with difficulty in adapting to their new surroundings.

Recent studies show that boys and girls are about equally likely to report using harmful substances. Boys are more likely to be heavy users of alcohol and other drugs and are more likely to be involved in physical fights and serious crimes. Adolescent girls may be at risk for substance abuse if they experience limitations on their behavior, leading to conflict between their feelings and the roles they are expected to play.

Although the behavior of some youth may look risky, care must be taken not to label students unnecessarily. It is useful to notice students in need but it can be detrimental if it creates the expectations of bad behavior.

TOBACCO USE AND ABUSE

Tobacco use is the most significant preventable cause of death in the United States, accounting for one of every six deaths. It is of great concern to school health personnel because so many youths begin smoking every year. Because 90% of smokers begin regular tobacco use before age 19, schools are the most important location for organized tobacco prevention activities.

Massachusetts law (M.G.L. c. 71, s. 37H) requires the superintendent of every school district to publish the district's policies pertaining to the conduct of teachers and students including those which prohibit the use of any tobacco products within the school



buildings, the school facilities, on the school grounds, or on school buses by any individual, including school personnel. Copies of these policies are available to any person upon request and without cost from the principal of every school within the district.

The Massachusetts Interscholastic Athletic Association (MIAA) treats tobacco as it does alcohol and other illicit drugs. Rule 14 of the MIAA requires that during the season of practice or play, a student shall not, regardless of the quantity, use or consume, possess, buy/sell, or give away any tobacco products, any beverage containing alcohol, marijuana, steroids, or any controlled substance except those specifically prescribed for the student's own use by his or her physician. An athlete violating this rule is not allowed to play in the next two consecutive interscholastic events. For subsequent violations, penalties are greater.

Tobacco use (smoking and smokeless) continues to be a problem behavior among school-age children, especially adolescents:

Prevalence of Tobacco Use Among Children and Adolescents

- Nationally, 90% of smokers start by age 19. Some start by age 10.
- Nationally, 75% of all youth who use tobacco have an older sibling or parent who uses tobacco.
- Over 1 million teenagers begin smoking each year, and an average of 3000 start smoking every day.
- At every age level, starting with sixth grade, more females than males smoke.

The 1994 prevalence study of tobacco use among 7th through 12th grade students in Massachusetts conducted for the Massachusetts Bureau of Substance Abuse Services by Health and Addictions Research found that:

- Smokers surveyed in grades 9-12 reported more everyday smoking than smokers in grades 7-8, 39% versus 21%.
- Lifetime smoking prevalence for grades 7-8 was 45%, up from 27% in 1990. Current use was 23%, up from 13%.
- Nine of ten (93%) students surveyed in grades 9-12 and seven of ten (70%) students in grades 7-8 reported that cigarettes are easy to obtain.
- Price increases in cigarettes seemed to have a noticeable effect on consumption. One of ten (11%) of those who smoked reported quitting due to price increases, while another 11% reported either trying to quit or buying fewer packs.

For each grade, Massachusetts adolescents surveyed reported more lifetime and current use of smoking tobacco in 1993 than their peers nationally. This difference has been noted since 1984 and is consistent with the historical observation that substance use is generally higher in the Northeast region of the United States.



The 1993 Massachusetts Youth Risk Behavior Survey, released in 1994, yielded the following results about cigarette and smokeless tobacco use among students in public secondary schools (grades 9–12):

- More than two-thirds (68%) of students surveyed reported having tried smoking at least once. This level is similar for male and female students and increases from over half (64%) of ninth graders to nearly three-quarters (73%) of twelfth graders.
- One-quarter (28%) of all students surveyed reported that they had smoked cigarettes regularly at some point in their lives (regular smoking is defined as smoking at least one cigarette a day for 30 days or more). The percentage of students who have ever smoked regularly increases with grade level.
- An average of 100 teenagers in Massachusetts begin smoking every day.
- Eight percent reported smoking regularly before age 13.
- Of those students who smoked in the last month, nearly three-quarters (70%) smoked more than two cigarettes per day on the days they smoked, and one in five (20%) smoked more than 10 cigarettes a day on those days.
- More than one-fourth of Massachusetts students have tried chewing tobacco or snuff. Nine percent used chewing tobacco or snuff in the 30 days preceding the survey.
- Young men are more likely to use smokeless tobacco than are young women (17% versus 1.5%). The use of smokeless tobacco is most prevalent among white male youth.

Detrimental Health Effects of Tobacco Use and Second-hand Smoke

Tobacco kills more people annually than homicide, suicide, auto accidents, alcohol, AIDS, and the use of other illicit drugs combined. Of Massachusetts children alive today (under age 20), based on current smoking rates more than 100,000 will be killed prematurely by tobacco use. There is growing evidence that tobacco may be a gateway drug to illicit drugs; almost all youths who experiment with illicit drugs have first tried tobacco.

The younger a person is when she or he starts smoking, the more likely that individual is to become addicted to nicotine, become a heavy smoker, have a harder time quitting, and be more likely to die of tobacco-related causes. Typically, nicotine addiction develops over a period of several years, from late childhood to early or mid-adolescence, but it is easier to become addicted the younger the age of initiation.

Smoking is a major risk factor for heart disease, chronic bronchitis, emphysema, and cancers of the lung, larynx, pharynx, mouth, esophagus, pancreas, and bladder. Tobacco is also known to cause allergies, headaches, and irritation.



More recently, the detrimental effects of second-hand smoke have been documented. Second-hand smoke is a combination of side-stream smoke produced by a lighted cigarette, cigar, or pipe and mainstream smoke exhaled by a smoker. It causes or aggravates many diseases including asthma, lung cancer, and heart disease.

In January 1993, the Environmental Protection Agency (EPA) issued a report calling second-hand smoke a carcinogen that kills about 3000 nonsmokers a year from lung cancer alone. Two weeks later, the Centers for Disease Control and Prevention issued preliminary results of a study showing that nonsmokers exposed to smoke had nicotine in their blood.

Second-hand smoke is a particular danger to young children because it causes acute and chronic respiratory problems, including pneumonia and reduced lung development. According to the EPA, up to 300,000 infants and young children annually have severe respiratory tract infections which are attributable to exposure to second-hand smoke. Second-hand smoke also causes more frequent ear infections in young children and places them at higher risk of developing asthma.

Contrary to the belief by many people that smokeless tobacco is a safe alternative to smoking, smokeless tobacco is harmful. It contains nicotine and can cause nicotine addiction. Within minutes, users of smokeless tobacco reach the same blood nicotine level as smokers. It also can cause mouth cancer in cheeks, gums, and throat. In addition, it can cause mouth sores, gum disease, tooth discoloration, and bad breath. (See also Chapter 15.)

Education about the hazards of tobacco use needs to start in kindergarten and continue every year. It should be part of an integrated and comprehensive health promotion curriculum, not a stand-alone curriculum. Strategies should be behaviorally based, teaching skills to assess and resist peer, media, and other cultural influences that promote tobacco use. Educational approaches should be developmentally appropriate.

Studies have shown that people who quit smoking live longer than those who continue to smoke. Those who quit perform better in sports, notice that their hair and clothes smell fresher, and their sense of taste improves. Some of the specific advantages of quitting tobacco use include:

Within 20 minutes: Blood pressure, pulse rate, temperature of hands and feet drop to normal.

Within 8 hours: Carbon monoxide and oxygen levels in the blood are normal. "Smoker's breath" is gone.

Within 2 days: Sense of smell and taste improves.

Within 3 days: Breathing becomes easier. Lung capacity increases.

Within 2 to 12 weeks: Circulation improves. Walking becomes easier.

The Importance of Prevention and Education

Benefits of Quitting Smoking



Within 1 to 9 months: Coughing, sinus congestion, and shortness of breath decrease. Overall energy level and stamina increase. Cilia regrow, helping the body to handle mucus and combat infections.

Within 2 years: Heart attack risk drops to near normal.

Within 5 years: Lung cancer risk drops 50%.

Within 7 years: Bladder cancer risk drops to near normal.

Within 10 years: The risk of most cancers (mouth, larynx, esophagus, lung, kidney, pancreas) is near normal.

Before the fourth month of pregnancy: The risk of having a stillborn or low birthweight baby will be reduced to normal rates.

Young women especially fear that if they give up smoking they will gain weight. However, the average weight gain after quitting smoking is only 5 pounds. The health benefits of quitting far exceed any risks from the 5-pound weight gain or any adverse psychological effects that may follow quitting.

Smoking and Tobacco Cessation Programs

The 1993 Massachusetts Youth Risk Behavior Survey found that of students who have ever smoked, over half (58%) reported having tried to quit in the last 6 months; this reflects almost two-thirds (61%) of females who have ever smoked and nearly one half (55%) of males who have ever smoked.

Schools may offer students assistance in overcoming addiction to tobacco. Youth tobacco use cessation programs have been developed by the American Lung Association and the Pathways Prevention Center of Southeastern Massachusetts using the peer education and leadership method and by both the American Cancer Society and American Lung Association using an adult-led model. The Massachusetts Prevention Centers can refer educators or students to cessation programs.

Any program for school-aged students should be positive and fun. Cessation typically is not successful long-term when it is forced upon a smoker. A smoker must want to stop smoking. Cessation programs should not be used as disciplinary measures, they should be offered as an alternative.

A smoking and tobacco cessation program should include the following components:

- Motivational and informative group sessions — discussion on feeling good about yourself.
- Discussion of social and environmental factors, such as appearance, advertising, smoking as a rite of passage, and the alarming increase of smokeless tobacco as an alternative to smoking.
- Customized interventions and planning; behavioral modification techniques.



- Group support.
- Nutrition recommendations to control weight gain.
- Stress management, exercise, and fitness recommendations.
- Provisions for those who relapse (most persons make at least seven attempts to quit before they are successful).
- For those who relapse repeatedly, a physician-prescribed transdermal nicotine patch may be effective in conjunction with a structured cessation program.

Suggested Tobacco-Free-Schools Policy

In an attempt to assist school committees in developing or strengthening existing tobacco prohibition policies, MDPH offers in Exhibit 14-2 a sample school tobacco-free policy and procedures form for students, staff, and citizens.

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RESOURCES

J. S. I. Training and Research Institute
210 Lincoln Street
Boston, MA 02111
(617) 482-9485



CHAPTER 14

J. S. I. houses the Massachusetts Tobacco Education Clearinghouse which has a resource library containing a vast collection of print and video materials on tobacco education.

Massachusetts Alcohol and Drug Hotline
34 Intervale Street
Dorchester, MA 02121
(617) 445-1500
(800) 327-5050

Massachusetts Department of Education
Bureau of Student Development and Health
350 Main Street
Malden, MA
(617) 388-3300 ext. 409

Massachusetts Department of Public Health
Bureau of Substance Abuse Services
150 Tremont Street, Sixth Floor
Boston, MA 02111
(617) 727-1960

Massachusetts Department of Public Health
Massachusetts Tobacco Control Program
150 Tremont Street, 2nd Floor
Boston, MA 02111
(617) 727-9250

Massachusetts Regional Prevention Centers - Refer to Section IV of this manual

Students Against Driving Drunk
P.O. Box 800
Marlboro, MA 01752
(508) 481-3568

ALCOHOL, TOBACCO, AND OTHER DRUGS



EXHIBIT 14-1

Commonly Used and Abused Drugs

Major Classification	Drug	Street name	How it is taken	Effects	Health Hazards
Stimulants	Cocaine/Crack	Coke, flake, girl blow, nose candy, C, rock, lady	Inhaled through nose, injected, smoked	Increased heart and respiratory rates, raised blood pressure, dilated pupils, decreased appetite, increased alertness, sweating, headache, shakiness, blurred vision, sleeplessness, dizziness, moodiness, restlessness, anxiety, runny nose (if inhaled)	■ If inhaled, may cause ulcers in nasal passages ■ Extremely high doses can cause rapid or irregular heartbeat, tremors, loss of coordination or physical collapse (stroke, heart failure) ■ Using large amounts over a long time can cause psychosis (hallucinations, delusions, paranoia). ■ Can cause psychological and physical dependency; tolerance develops rapidly. ■ If injected with shared needles, user may contract AIDS or other diseases.
	Amphetamines (e.g., Dexedrine, Benzedrine)	Dexies, speed, uppers, bennies, black beauties, pep pills, copilots, Christmas trees, ice	Taken orally, injected, inhaled through nose		
	Caffeine	Tea, cola, cocoa, coffee	Taken orally		
	Nicotine	Butts, squares, coffin nail	Smoked, chewed		
Depressants	Alcohol	Booze, fire water, juice, oils	Taken orally	Relaxation, slurred speech, staggering gait, altered perception, slowing down of reflexes and mental processes, calmness	■ Very large doses can cause respiratory depression, coma, and death. ■ Combining alcohol and other depressants can multiply the effects and the risks. ■ Can cause psychological and physical dependence; tolerance can develop. ■ Withdrawal symptoms range from restlessness, insomnia, and anxiety to convulsions and death.
	Barbituates (e.g., Amytal, Seconal)	Downers, barbs, blue or red devils, yellow jackets	Taken orally		
	Methaqualone (e.g., Quaaludes)	Ludes, sopors	Taken orally		
	Tranquilizers (e.g., Valium, Librium)	Muscle relaxers, sleeping pills, goof balls	Taken orally		
Narcotics	Heroin	Smack, horse, H, junk, stuff	Injected, smoked, inhaled through nose	Euphoria, relief from pain, contentment, drowsiness, nausea, constricted pupils, watery eyes, itching	■ An overdose may produce slow and shallow breathing, clammy skin, convulsions, coma ■ Can cause psychological and physical dependency; tolerance develops rapidly. ■ If injected with shared needle, user may contract AIDS or other diseases.
	Morphine	Dreamer, M, Emma	Injected, smoked, taken orally		
	Methadone	Dollies	Injected, taken orally		
	Opium	Dope, monkey	Smoked, eaten		
	Codeine	Syrup, schoolboy	Taken orally, injected		
Cannabis sativa	Marijuana	Pot, grass, weed, reefer, Mary Jane, joint, gold, Thai sticks	Eaten, smoked	Relaxation, sleepiness, impairment of short-term memory and comprehension, altered sense of time, poor concentration and coordination, anxiety, confusion, distortion of perception, red eyes, increased heart rate, increased appetite	■ Smoke is damaging to lungs. May cause psychological dependence. ■ Can produce paranoia and psychosis. ■ May damage liver. ■ May affect maturation or function of reproductive system.
	Tetrahydrocannabinol	THC	Taken orally, smoked		
	Hashish	Hash	Eaten, smoked		
	Hashish Oil	Oil	Smoked (mixed with tobacco)		
Hallucinogens	Lysergic Acid Diethylamide	LSD, acid, cubes, microdot, Big D	Licked off paper, taken orally, gelatin, or liquid put in eyes	Pupil dilation, higher body temperature, increased heart rate and blood pressure, sweating, loss of appetite, illusions and hallucinations, tremors, anxiety	■ Effects are unpredictable. ■ Flashbacks can occur even after use has ceased. ■ Bad trips, which may lead to suicide. ■ Heavy users may develop brain damage.
	Mescaline and Peyote	Mesc, buttons, cactus	Taken orally, chewed, smoked		
	Psilocybin	Magic mushrooms, 'shrooms	Chewed and swallowed		



CHAPTER 14

EXHIBIT 14-1

Commonly Used and Abused Drugs (continued)

Major Classification	Drug	Street Name	How it is taken	Effects	Health Hazards
Inhalants	Solvents, nitrous oxide, aerosol sprays, paint thinner, gasoline, nail polish, model glue, cleaning fluids	Laughing gas, whippets, poppers, snappers, rush, bolt, locker room, bullet, climax	Vapors inhaled	Nausea, sneezing, coughing, nosebleeds, fatigue, lack of coordination, bad breath, loss of appetite, exhilaration, confusion, change in heart rate (some increase and others decrease).	■ Deeply inhaling vapors or using a lot in a short time may cause disorientation, violent behavior, unconsciousness, or death. ■ Long-term use may cause weight loss, fatigue, electrolyte imbalance, muscle fatigue, and permanent damage to nervous system, liver, kidneys, blood, and bone marrow.
Anabolic Steroids	Steroids (e.g., Dianabol, Durabolin, Winstrol)	'Roids	Taken orally, injected	Quick weight and muscle gain, acne, aggressive and hostile behavior, jaundice, swelling of feet or lower legs, trembling, persistent unpleasant breath odor, purple or red spots on the body.	■ Long-term use can damage the liver, cardiovascular system, and reproductive system. ■ In individuals who have not reached full growth, can arrest bone growth. ■ Users may develop changes in sexual characteristics which may be difficult or impossible to reverse. Males: abnormal hair growth, breast enlargement, shrunken testicles, sterility. Females: shrinkage of breasts, menstrual irregularities, growth of facial hair, deepening of the voice, enlargement of the clitoris.
Phencyclidine	PCP, Sernyl, Sernylan	PCP, peace pill, hog, killer weed, angel dust	Taken orally, injected, smoked (on tobacco, marijuana, or parsley)	Increased heart rate and blood pressure, sweating, dizziness, slowing of time and movements, dulling of senses, poor coordination, speech blocked or incoherent	■ Large amounts may cause death from convulsions, heart or lung failure, or ruptured blood vessels in the brain. ■ May cause violent or bizarre behavior or paranoia. ■ Regular use affects memory, perception, concentration, and judgment. ■ If injected with shared needle, user may contract AIDS or other diseases.



EXHIBIT 14-2

Sample Tobacco-Free School Policy and Procedures

Implementation

According to M.G.L. c. 71, s. 37H (effective June 4, 1993), smoking and use of tobacco products are prohibited on all school property at all times by students, staff, and visitors. This shall include school buildings, on school property, and in school owned/contracted/leased vehicles.

Informing Students, Staff and Parents

All schools will inform students, staff and parents of the mandates of this policy and its accompanying procedures, a copy of which will be distributed to all students and parents. Announcements will be made at the beginning of any school event open to the public, including outdoor athletic events on school property.

Enforcement

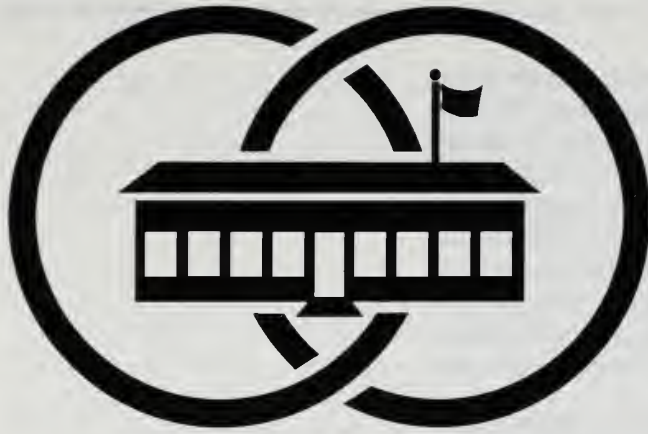
The success of these regulations will depend upon the thoughtfulness, consideration, and cooperation of smokers and nonsmokers. All individuals share in the responsibility for adhering to and enforcing this policy. Any individual who observes a violation may report it in accordance with the procedures listed below.

Violation by Students

Any violation of this policy by students shall be referred to the building principal at the elementary/middle school level and the housemaster at the high school level. Students who violate provisions of this policy shall be subject to building student discipline procedures and may be offered the opportunity to participate in either a tobacco education program, or, if they are suitably motivated, a smoking cessation program. The following actions will be taken when an incident of a student smoking on school grounds or property is reported. (Include sample actions as determined by school administration/school committee.)

Violation by Citizens

Citizens who are observed using tobacco in school buildings or school owned/contracted/leased vehicles shall be asked to refrain from smoking. If the individual fails to comply with the request, his or her violation of policy may be referred to the building principal or other school supervisory personnel responsible for the area or program during which the violation occurred. The supervisor shall make a decision on further action, which may include a directive to leave school property. Repeated violations may result in a recommendation to the superintendent to prohibit the individual from entering school property for a specified period of time. If deemed necessary by school administration, the local law enforcement agency may be called upon to assist with enforcement of this law or of trespassing.



Chapter 15

ORAL HEALTH

Scope of the Problem

Legal Responsibility of Schools

Health Promotion, Prevention, and Education

Dental and Other Oral Problems

First Aid for Dental Problems and Emergencies



Oral health is an important component of overall health, and thus should be an integral part of a comprehensive school health program. The oral hygiene practices developed as a child, the quality of dental care, community water fluoridation, and a good diet will determine a person's oral health throughout life. Schools have an important role to play in promoting oral health by participating in school-based prevention programs such as fluoride programs, providing dental health education, being aware of dental and other oral problems, and providing well-balanced nutritious meals as part of the school food service.

Oral health contributes to the general wellness and quality of life; it can affect general physical health, appearance, speech, and interpersonal relations. Former surgeon general C. Everett Koop made a point of saying, "If you don't have oral health you are not healthy." The consequences of a diseased mouth in the school-aged child can result in pain, infection, lower level of concentration on school work, loss of time from school, limited ability to chew foods, speech defects, poor appearance, and premature loss of teeth. The results of these conditions affect children's overall physical and emotional health, often hampering their ability to achieve full social and academic potential.

The main goal of any school oral health program is to prevent oral disease. A school oral health program should be made available to all children, especially those who may not have access to dental information provided during regular dental visits. The program should be able to help every child maintain his or her own teeth and oral health. It should also work to stimulate resources in the community to make affordable dental treatment available and to promote preventive measures, such as community water fluoridation and the use of fluorides and sealants, for all school-aged children.

SCOPE OF THE PROBLEM

Oral diseases can be largely eliminated by the combined use of educational and primary and secondary preventive methods. Yet, Massachusetts school children continue to have a high rate of these diseases: tooth decay, periodontal diseases (inflammation of gums and supporting structures), malocclusion (irregularity in the teeth or jaw), and trauma from oral injuries. Massachusetts and other New England states have one of the highest rates of decay in the United States. Possible reasons are the lack of fluoridated water supplies, poor nutrition, and the high consumption of carbohydrates.

Nationally, diseases of the mouth, one of the most common health problems, affect about 98% of the entire U.S. population at some point in their lives. By the age of 3 years, most children have decay in more than one tooth, and 84% of 17 year olds have had tooth decay with an average of eight affected tooth surfaces. Currently, about 14% of 6 to 11 year olds have periodontal (gum) disease; this rises to 60% of teens. Early and regular dental care among children is far from universal. In 1986–1987, a national survey stated that 25% of 5-year-old children had never visited a dentist.



Poor children are at higher risk for oral disease than the general population. Statistics indicate this population group has four times more untreated decayed teeth than high-income children. Lack of finances, limited access to a dentist, low parental education, and fear of pain, as well as the more complex sociocultural attitudes are some of the contributing factors.

The cost associated with dental diseases can be staggering; as a result, children of some low-income families may have diseased teeth that are left untreated. Access to services is a problem when dentists will not accept Medicaid or offer their services for reduced fees. There are 27 community health centers in Massachusetts that provide dental care at a reduced fee, 20 of which are located primarily in the metropolitan Boston area.

LEGAL RESPONSIBILITY OF SCHOOLS

Massachusetts statutes do not refer directly to the subject of dental health or dental treatment in the school program. M.G.L. c. 111, s. 50 – 56 outlines the responsibilities of local boards of health in establishing clinics supported by tax funds. Due to lack of funding many districts have not been able to maintain dental clinics. While Massachusetts does not specifically mandate children entering school to have a dental examination, this objective may be linked locally to other medical requirements for children entering school, such as physical examinations, screenings for hearing, vision, and height and weight, and immunizations. Special efforts should be made to reach developmentally disabled children, as well as children with other disabling conditions.

HEALTH PROMOTION, PREVENTION, AND EDUCATION

There are several ways in which children, with the help of their parents, can promote good oral health and prevent oral problems from occurring when they are older: regular checkups, good oral hygiene and nutrition, and preventive services such as fluoride treatments and sealants. Dental screening is an important component of health promotion and disease prevention. (See Chapter 5 which has a section on Dental Screening.)

Fluorides

Fluoride is a naturally occurring trace element present in small but widely varying amounts in all soils, water supplies, plants, and animals. Fluoride products are intended for use either systemically or topically. *Systemic fluoride* is ingested, absorbed, and incorporated into developing bone and unerupted teeth (teeth that have not yet come through the gum into the oral cavity). Methods of delivering systemic fluoride in the United States include community water fluoridation, school water fluoridation, and dietary fluoride supplements. *Topical fluorides* are applied to erupted teeth and are not incorporated within the developing tooth structure. The fluoride strengthens the surface of the teeth already in the mouth. Topical fluorides may be professionally or self-applied. The school mouth-rinse program is an example of a topical application of fluoride. The

systemic and topical fluorides should complement each other for an additive benefit, providing more protection for children.

Community Water Fluoridation

Community water fluoridation is the most effective, economical, and safe means of preventing tooth decay (cavities). Essentially all water contains trace amounts of fluoride; community water fluoridation is the adjustment of the amount of fluoride to an optimal level that ranges from 0.7 to 1.2 parts per million. Children in communities where fluoride has been added to the water for 10 or more years show a 60 to 70% reduction in tooth decay. Currently, 121 of the 351 communities in Massachusetts have community water fluoridation, representing a little more than half the state population.

M.G.L. c. 111, s. 8C states that only the local board of health can order water fluoridation. Community water fluoridation involves increasing the low level of natural fluoride in the water to one part fluoride per million parts of water. The cost of community water fluoridation is low — approximately 25 to 75 cents per person per year — and is beneficial to all age groups. However, the recent increase in the consumption of bottled water and lack of labeling standards of fluoride content are additional influences to consider. Both of these may contribute to: (1) dental fluorosis, if the water's fluoride content is high (above 1.2 ppm) and if fluoride supplements are continued, or (2) increase in dental decay if bottled water is thought to contain optimum levels of fluoride but actually has only low levels. All the scientific evidence conclusively shows that fluoridation is safe and effective.

Dietary Fluoride Supplements

The practice of giving children daily dietary fluoride supplements has been developed for use in areas where optimally fluoridated drinking water is not available. The current recommendations for prescribing dietary fluoride supplements depends on the age of the child and the concentration of fluoride already in the drinking water. For more information on whether it is advisable for a school district to provide dietary fluoride supplements, see the Resources listed at the end of the chapter.

School-based Fluoride Mouth Rinse Program

The primary objective of this preventive program is to give school-aged children in grades 1 through 6 a simple, effective, and inexpensive means of preventing dental decay. This program is designed to be offered in areas where community or well water is not optimally fluoridated. For communities that have had water fluoridation for five or more years, this program is not indicated. An exception would be if children in specific areas are known to have unmet dental needs.

The weekly mouth-rinse program using a 0.2% solution of sodium fluoride has been shown to be effective in preventing dental decay. Fluoride rinse programs are an important adjunct to good oral health, along with the use of fluoride toothpastes at home and professionally applied fluorides in the dental office.



Since 1978, the state has been purchasing fluoride mouth rinse kits for grades 1 through 6. The 225 school systems that use this program find it appropriate and effective for the following reasons: (1) little time is required for the procedure (approximately 5 minutes of classroom time each week), (2) few materials are needed, (3) it is easy for school children to participate, (4) nondental professionals can supervise the process with minimal training, and (5) there is no cost to the school as all supplies are provided by the MDPH, Office of Dental Health.

In the 1992–1993 school year, approximately 45,000 Massachusetts school children participated in this program, which depends on school nurses, teachers, health aides, volunteers, dental hygienists, assistants, and parents to serve as monitors.

Flossing and Brushing Teeth

Flossing removes bacteria and food particles between the teeth; brushing with fluoride toothpaste removes bacteria and food particles *on* the tooth surfaces. Children should be encouraged to brush with fluoride toothpaste after breakfast, before going to sleep at night, and after eating sticky sweets.

Dental Sealants

Dental sealants are thin plastic coatings that are applied to the chewing surfaces of the molars (back teeth) to prevent tooth decay. Most tooth decay in children and adolescents occurs on the chewing surfaces of these molars and premolars. These teeth have irregular surfaces with deep pits and grooves, which tend to trap food and bacterial debris. Sealants are applied to these pits and grooves so that bacteria cannot multiply and cause decay. They prevent caries by their physical presence on the teeth, creating a barrier to decay, rather than by a chemical reaction. Therefore, caries protection is determined by the sealant's ability to remain adhered to the tooth; as long as the sealant remains intact, caries will not develop beneath it.

The teeth most likely to benefit from sealant application are the first and second molars just after they have erupted and before they have had a chance to decay. Children between the ages of 5 and 14 benefit most from sealants. Once a tooth has matured, it is less prone to decay, although sealants can also benefit adults. A sealant application can last five years or more. Sealants *do not* replace the use of fluoride, which helps prevent decay on the smooth surfaces of teeth, but should be used as part of a child's total preventive dental care. Although dental sealants are extremely effective, a recent survey done by the National Institute of Dental Research shows that only 8 percent of children have received them. This is because that many people still do not know what sealants are and why their use is beneficial.

Dental Examinations

Regular dental exams are important for the maintenance of children's oral health. A child should visit a dentist twice a year. For families who cannot afford to see the dentist, the school nurse may be able to help by contacting the local dental society, the Massachusetts Dental Society, or the local board of health to obtain the names of dentists who offer low-cost services or accept Medicaid. (See also Dental Screening in Chapter 5.)

Restricting Sugar and Refined Carbohydrate Intake

Another dental health promotion activity is restricting intake of foods high in refined carbohydrate (sugar) content, such as candy, cookies, crackers, and bread with butter, along with “sticky” foods. When these foods remain on the teeth, they make the teeth more susceptible to decay. An oral health education program should help students restrict their intake of sugar and sweet and “sticky” foods and frequent between-meal snacks. Sweet snacks in vending machines and school lunch and breakfast programs should be eliminated and replaced with foods containing the essential body nutrients. (See Chapter 9 for more on nutrients.)

Oral Health Education

A comprehensive school health education program should include age-appropriate oral health education. Home care and prevention of dental problems should be stressed. It is commonly known that failure to develop proper oral hygiene behaviors during childhood will most likely result in poor oral hygiene throughout life. (Refer to Chapter 3 for a discussion of the objectives and content of an oral health education curriculum.) Education of expectant parents and the first dental visit prior to the first birthday are of utmost importance. A “well dental visit” during the first year of life is important for identifying poor feeding patterns and oral habits and to establishing good oral hygiene habits to last a lifetime.

DENTAL AND OTHER ORAL PROBLEMS

The most common dental problems that children experience are dental caries (cavities), periodontal (gum) disease, and malocclusion. Traumatic oral injuries and oral cancer are on the increase. Most of these oral problems are preventable. Early diagnosis and prompt treatment can eliminate pain, infection, and progressive oral diseases.

Dental Caries (Cavities)

Dental caries or tooth decay is the destruction of tooth structure due to plaque on the teeth. Plaque is soft, sticky, colorless masses of harmful germs (bacteria). Their by-products live in the mouth and are constantly forming on the teeth. These by-products combine with sugars in the mouth to form acids which dissolve the tooth enamel and initiate the process of tooth decay. Decay in children usually begins in the pits and grooves of the teeth, where most plaque accumulates. If not treated, it dissolves the enamel and works into the dentin. When both enamel and dentin are destroyed, the pulp may become involved, and an abscess could occur.

The national average of decayed and filled surfaces of the deciduous teeth of children ages 5 through 9 is 3.91. That number doubles by the teen years. A Massachusetts dental survey conducted between 1979 and 1981 found that by the time a Massachusetts child reached the age of 17, 95% had experienced tooth decay. The average Massachusetts teen had 14 tooth surfaces affected by tooth decay, while the national average was 10 — a full 30% lower than the Massachusetts level. About 84% of adolescents still suffer from tooth decay.

Prevention of Dental Caries

Early screening and detection of caries by a pediatric dentist is recommended between the ages of 1 and 2. Preventive measures



include plaque control education, fluoride in drinking water, school fluoride mouth-rinse program, the use of fluoride toothpastes and sealants, dietary control, and nutrition education.

Periodontal Disease

Periodontal disease is an inflammation of the soft tissues and bone that surround and support the teeth. The major cause is an accumulation of plaque (bacteria) at the gum line. Although periodontal disease is most common among adults, it can occur at any age. Gingivitis — red, swollen, and irritated gum tissues — is common among school-aged children, and occurs often among teens because of hormonal changes during puberty. Nationally, 60% of adolescents have gum infections by age 15. Other causes of periodontal disease are the use of smokeless tobacco, poorly aligned teeth, clenching or grinding the teeth, some systemic diseases, and improperly fitting fillings or crowns.

Prevention of Periodontal Disease

Oral hygiene education is important in prevention of periodontal disease. Most cases of gingivitis (the beginning stage of periodontal disease) are reversible through adequate plaque control. Brushing and flossing of teeth and massaging the gums with a stimulator will help prevent periodontal disease, as will stopping the use of smokeless tobacco, replacement of ill fitting crowns and poor fillings, and wearing an appliance to halt the crunching and grinding of teeth.

Malocclusion

Malocclusion, also called crooked teeth or improper bite, is an irregularity in the teeth or jaw position that prevents the upper and lower teeth from biting together properly. The two major causes of malocclusion are heredity and the environment. Some hereditary factors are large tooth size, small jaw, and incorrect jaw alignment.

Environmental factors, which are generally preventable, include premature loss of primary teeth, early loss of six-year molars, thumb and finger sucking, incorrect swallowing, and fingernail biting. Crooked teeth and improper bites affect general health as well as dental health, speech, and personal appearance. Crooked teeth are harder to brush and are more susceptible to tooth decay, gum disease, and temporomandibular joint disorders (TMJ) which may also have a negative psychological impact on the child. Chewing certain foods and pronouncing certain syllables may become difficult when teeth are missing.

Prevention of Malocclusion

Early screening is a key preventive aid. Parents, children, and teachers should be educated about the harmful effects of nail biting, prolonged thumb or finger sucking, and other habits such as pencil chewing. Thumbsucking during the first several years should not cause concern; it is only a problem if the child continues beyond the age of 5 years. After this age, it can affect the position of the incoming permanent teeth and the shape of the jaw. The pressures of thumbsucking may push the teeth out and narrow the dental arches.

Early loss of primary teeth is usually a direct result of neglect and can easily be prevented. An interceptive measure is the use of space maintainers when primary teeth are prematurely lost.

Oral Cancer

The most frequent symptom of oral cancer is a sore or irritation (white or red patches) in the mouth that persists over a period of time and does not respond to therapeutic treatment. It may be present on the lips, cheeks, gums, tongue, throat, or palates.

Tobacco (smoking and smokeless) and alcohol use are the major risk factors for oral and pharyngeal cancer. Of increasing concern to health professionals is the use of smokeless tobacco among youth. Mortality is high; it is estimated that tobacco use plays a major role in 75% of mouth and pharyngeal cancer. Increased consumption increases risk. Overall, fewer than half the patients with oral cancer are cured, and treatment is not without personal and social costs. It can cause pain and suffering, loss of speech, hearing, and chewing functions, and disfigurement of the head and neck.

Prevention of Oral Cancer

The only way to prevent oral cancer from tobacco products (smoking and smokeless) is to avoid using them at all, and if one has already started, to stop. Ongoing screening will aid in early detection which is important for therapeutic intervention.

Traumatic Oral Injuries

The most common oral injuries are fractured and chipped teeth, broken jaw, severed lips, and lacerated gums. These traumas occur most often at athletic competitions and recreational events, and are highest among adolescents. In addition to contact sports and recreational play, auto accidents are a major cause of oral injuries. Children also may receive trauma to the head, face, or mouth if they are abused or if they accidentally fall, trip, or are pushed against something like a water fountain. What makes dental injuries different from injuries to other parts of the body is that the results of treatment may not be known for up to five years.

Prevention of Traumatic Oral Injuries

Mouthguards, helmets, and face masks are critical equipment during sports and recreation. Use of seatbelts in autos as well as proper adult supervision on playgrounds, stairs, and at drinking fountains will help prevent traumatic injuries from occurring. Also, early orthodontic treatment is recommended since some children may be more prone to trauma due to protruding anterior teeth.

FIRST AID FOR DENTAL PROBLEMS AND EMERGENCIES

The following information is designed to assist school nurses and other personnel in treating minor dental emergencies. Although the first aid procedures should provide temporary relief, they cannot always solve the dental problem. Should a dental emergency occur, those providing care should:

1. Notify the parent/guardian immediately of the existing emergency.
2. Consult with a dentist as soon as possible.
3. Obtain a thorough history of the injury: how it occurred, why, and what the symptoms are.



A dental first aid kit kept in the office should contain the following (note that administering medications requires a licensed provider's order):

Basic Supplies

- cotton and cotton swabs
- sterile gauze pads (square 2 x 2)
- tea bags
- dental floss, toothbrushes, stimulents or toothpicks
- tweezers
- ice pack or wet frozen washcloth
- paraffin, candle wax

Medications

- salt
- hydrogen peroxide
- acetaminophen
- oil of cloves
- Orabase with benzocaine

First Aid Procedures

• Toothache

Ask the parent to call a dentist at once because the toothache may be a forewarning of a possible abscessed tooth. Rinse the mouth vigorously with warm water to clean out any debris. If swelling is present, apply a cold compress to the outside of cheek. If fever is present, an aspirin substitute may be given and swallowed to relieve pain, provided medical order and parental consent are obtained.

• Broken tooth

Contact the parent. The child should see a dentist immediately. If a broken tooth is not cared for, the tooth can be permanently damaged and may have to be removed. If the broken tooth has a sharp edge, it may be covered with paraffin (wax) to prevent tissue laceration.

• Bleeding gums

This may be a result of gum disease, poor oral hygiene, trauma to the mouth, or vitamin deficiency. Red, sore, or swollen gums should be rinsed with either warm saltwater ($\frac{1}{2}$ teaspoon salt in 8 ounces of warm water) or a diluted 3% hydrogen peroxide solution (equal amounts water and peroxide). If bleeding is due to trauma, apply direct pressure using a 2 x 2 gauze square. Apply cold compresses to the outside to reduce swelling. If the problem is systemic or does not improve with good oral hygiene, notify the parent to consult with a dentist.



- **Knocked-out tooth**

Contact the parent. *Save the tooth.* Sometimes it can be reimplanted in the jaw. Rinse the tooth gently. Do not wipe or scrub the tooth; otherwise, important cells that allow the root to be reattached will be lost. Try to insert it back into the tooth socket. If this procedure is too painful, place the tooth in a glass of milk or water. Rush the child and tooth to a dentist immediately (within 30 minutes, if possible). See above paragraph, for treatment if gums are bleeding.

- **Fever blister, cold sores, and canker sores**

Apply Orabase with benzocaine (in moderate amounts) for temporary relief of the canker sores. Acetaminophen may be given systemically for pain or fever. (See regulations governing the administration of medications in schools in Chapter 6.) Never place the tablet on the sore as this will cause chemical burn. Have the student avoid "kissing" contact with others, sun or wind exposure, and spicy or acidic foods. Recommend the parent consult with a dentist if pain or fever persists.

- **Trauma to face and head**

Stop the bleeding and control for shock if necessary. Contact the parent and arrange for the child to be taken immediately to an oral surgeon or a hospital emergency room. Obtain a detailed history of the accident. Find out if there was loss of consciousness and if the child is experiencing any pain and where. If there is nausea or dizziness, have the child checked by a neurologist. At the hospital, the child should be seen by an oral-maxillofacial, orthopedic, or plastic surgeon, if available.

- **Lacerated lip/tongue**

Apply direct pressure to the bleeding area with a sterile gauze square for 15 to 30 minutes. If swelling is present in a lip injury, apply a cold compress. Check for broken/fractured or lost teeth. If the bleeding does not stop readily or the injury is severe, contact the parent to take the child to a physician, oral surgeon, or hospital emergency room. Vigorous bleeding may be expected initially.

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CHAPTER 15

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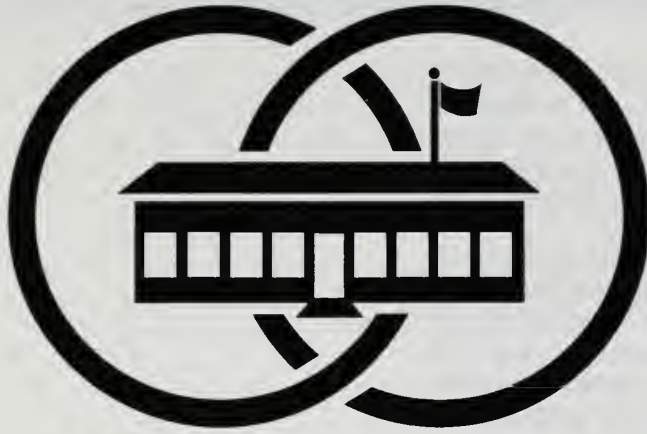
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RESOURCES

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Office of Dental Health
150 Tremont Street
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(617) 727-0732

Massachusetts Dental Society
1-800-342-8747



Chapter 16

REFUGEE AND IMMIGRANT HEALTH CARE

Strategies for Cultural Assessment

Factors That May Affect Access to Health Services



Chapter 10

THEORY OF THE EARTH

THEORY OF THE EARTH

THEORY OF THE EARTH



Newcomers to the state may experience language problems, be unfamiliar with Western health care, or lack knowledge of specialized services. This chapter addresses issues that may affect access to health care information and services for immigrant and refugee children and adolescents.

A *refugee* is defined by the United Nations as a person forced to flee his or her country of origin due to persecution or fear of persecution because of religious, political, or other beliefs. Refugees may flee to or be resettled in the United States. Most refugees enter with refugee documents, having been awarded refugee status by the Immigration and Naturalization Service (INS).

An *immigrant* comes into the country through the immigration program implemented by the INS. Immigrant priorities are based on family reunification and skills not available among U.S. workers.

Recent arrivals to the United States, whether refugees or immigrants, face a period of enormous change and adjustment that can affect their physical and emotional well-being. Many families leave their country due to violence, political strife, or poverty. For some students, the trauma in their backgrounds, in addition to the unsettling or stressful experience of being in a new country, may create physical symptoms such as headaches or fatigue that cannot be clearly identified as physical in origin. They may exhibit psychological disorders, and posttraumatic stress syndrome is not uncommon.

Health practices are affected by variables such as ethnic values, cultural orientation, religious beliefs, and linguistic considerations. Schools and health care providers may have limited knowledge about the cultural backgrounds, social expectations, and work experiences of refugee and immigrant populations, including their beliefs, attitudes, and cultural life-styles.

Awareness of factors that may prevent newcomers from seeking care can help a school intervene on behalf of a refugee or immigrant student. The following issues, commonly shared by many newcomers, create a challenging situation for school personnel working with parents or other family members of school children.

STRATEGIES FOR CULTURAL ASSESSMENT

The following strategies for cultural assessment serve as guidelines for school personnel in transcultural interactions:

- Consider students and their families as *individuals* before considering them as members of a specific cultural group.
- Never presume that an individual's ethnic identity is any indication of his or her cultural values or patterns of behavior.
- Treat all presumptions about cultural values and traits as hypotheses to be tested anew with each individual. Turn "facts" into questions.



- Take into consideration that newcomers are bicultural of necessity, and face the task of integrating at least two different cultures that may conflict.
- Some aspects of an individual's cultural history, values, and life-style may prove relevant to a school health situation; others may be simply interesting professionally. Do not prejudge what areas are relevant to an individual's understanding of any health issue.
- Understand the dynamics of cultural pluralism.

FACTORS THAT MAY AFFECT ACCESS TO HEALTH SERVICES

Refugees and immigrants from different countries often share common experiences when dealing with health services in the U.S. Varying cultural beliefs and habits may lead to difficulties in accessing or understanding the Western health care delivery system. In addition, factors such as language, transportation, and lack of information may seriously affect access to services.

Language

It is common for refugee and immigrant children to learn the new language sooner than their parents. Positioned between their family and the school or health community, students may be expected, by both family and the school, to serve as interpreter, and, as such, become the primary decision makers. School-aged youth may translate information based primarily on what they believe their parents want to hear. Alternatively, they may circumvent parents entirely because they may believe it is not important for parents to be informed or to intervene. Although it may be difficult to find adult translators, it is best not to use the child as translator. When obtaining information, it is important to assure both the child and parent that health matters being discussed are strictly confidential.

Some parents — because their English skills may be limited — may feel isolated from the school community. For this reason, they may not appear to show interest in school reports sent home. A special effort by teachers and administrators to invite these parents to the school may help them form a stronger connection with the school community. Also, it may be beneficial for school personnel to meet with representatives of local ethnic communities to find out about community issues and concerns.

Overcoming Institutional Barriers

Specialized services for treating newcomers with health and mental health problems may be scarce. Translation services may not be available or reimbursable. Schools should maintain a list of community health and mental health programs that are sensitive to cultural issues, have appropriate interpreters, and offer sliding scales or free care.

Refugee and immigrant patients may be eligible for publicly supported health and mental health care as a result of limited economic resources. As such, they may be perceived as competing with other underserved communities for access to health care, and in some cases even experience outright discrimination. Undocumented residents are *not* eligible for Medicaid, only for



emergency medical services (although U.S.-born children may be eligible for Medicaid).

Undocumented residents have a unique and heightened set of health concerns, and some may resort to using an underground network of contacts and services. The school should maintain and publish an updated list of doctors and primary health care providers/facilities who provide emergency medical services, speak languages other than English, and provide sliding scale or free care for parents, thereby enabling them to get adequate health care for their children.

Of special concern to school health administrators are student health and immunization records. It is common for newcomers to leave their country with incomplete health records, no records at all, or with immunizations that are not administered according to U.S. standards. Massachusetts law requires that all children be immunized prior to enrollment in school, and school administrators must have proper documentation in hand to allow a child to attend. Where there is no documentation, the immunization series is initiated even if the family reports that the child has been immunized in their country of origin. For working parents who are pressed for time, completing records or adhering to follow-up procedures may be difficult. Newcomers should be encouraged to complete a health assessment for themselves and their children soon after arrival in the U.S.

Some refugees and immigrants may come from parts of the world where tuberculosis (TB) is endemic. School nurses may be helpful to children taking TB medication by checking for compliance with the treatment schedule.

Lack of transportation may present a barrier to refugee and immigrant parents seeking medical care. Local agencies that advocate and/or provide services for newcomers may be able to assist in overcoming this barrier to care.

Cultural Beliefs About Health Care

It is extremely important for school personnel to learn about the communities and the cultures of their students. One cannot generalize about any immigrant or refugee group based on one's experience with or knowledge of one child or another ethnic group. The fact sheets in Exhibit 16-1 were prepared by the Office of Refugee and Immigrant Health of MDPH in 1994. They give more detailed descriptions of various ethnic communities in Massachusetts.

Prevention is not a common approach to health care in many parts of the world nor are Western style health services commonly available. As a result, newcomers may wait until they are in crisis, either physically or emotionally, before seeking primary care. It is helpful to talk with a family or with a community agency to assess their knowledge of and experience with Western health care systems.

In developing countries, public health programs typically are administered either in the schools or through government services. Because the public health system in many developing countries



plays a major role in meeting the health needs of the community, some immigrant parents may assume the same is true here and appear to be neglecting responsibility for their children's health care. Some may believe it is the automatic responsibility of the school or a medical provider to determine any and all care. Teachers, therefore, may be expected to identify illness and care for the child. A sick child may be sent to school, with the expectation that school staff will address the problem as a matter of course.

Limited resources or a fear of medical institutions may keep families away from health facilities. In some cultures, individuals believe doctors have special powers and knowledge. When a doctor asks pertinent questions, patients may not reveal information since they believe the doctor must already have the answer.

Home Remedies

Health problems in various ethnic communities may be handled by using home remedies such as healing teas, soups, garlic, or herbs — for example:

- Members of the Portuguese communities (Azores, Cape Verde, Brazil, Madeira, Angola, Mozambique) may apply poultices for boils and make their own ointments.
- Some individuals from the Azores may prefer their own treatment for intestinal parasites since it is a common practice in their country of origin to take a medicine for parasites once annually.
- For some Brazilians, hot oil is a treatment for earaches, although it is sometimes ineffective and can be harmful.
- Some Southeast Asians subscribe to the use of “cupping” and “rubbing” as remedies for illness. *Cupping* is the process of creating a vacuum by igniting a small candle inside a cup. When the flame extinguishes, suction is created which draws out “toxic wind” of the noxious element. *Rubbing* involves an insistent rubbing of the skin lubricated with medicated oil with a spoon or a coin, in order to bring “toxic wind” to the body surface. Both practices leave harmless red marks on the skin which may be misinterpreted as child abuse by uninformed observers.
- Many groups, including Hispanics and Asians, may believe in the concept of *hot-cold*. Hot-cold properties are attributed to substances that affect the body from either within or without, such as foodstuffs, medicines, elements, air, and the innate quality of certain bodily organs. The effects of cold, especially cold night air on the body, remain significant in the etiology of illnesses such as earache, stomach cramps, rheumatism, headache, and chest cramps. Hot illnesses are due to heat generated within the body, often originating in the intestines or stomach, and radiating to the body surface, producing skin



rashes, fever, hoarseness or a coated tongue. It is helpful for health personnel to be aware of these beliefs, and incorporate hot-cold concepts in the presentation of treatment options.

While some home remedies are effective, if one fails, a family may approach their ethnic community center for assistance before contacting a health professional. In some ethnic communities, religion plays a primary role, so a religious leader (rather than a medical provider) may be consulted.

As a result of traditional beliefs or concern about the cost of medical care, residents in some ethnic communities may visit a healer (a *curandera* in Hispanic cultures) for broken bones or fever, or else will try to cure themselves. For some newcomers, there may be confusion about how medication is obtained in the United States. Not everyone understands that in the U.S. many medications require a prescription written by a licensed prescriber and that a prescription written for one person should not be given to another.

Family Roles

Family size, traditional family roles, and approaches to raising children are other factors for school personnel to take into consideration when dealing with the health needs of a student. When the family structure is large and inclusive, a child may be under the direct care and supervision of an uncle or aunt or other extended family member. This individual will sometimes be identified as the parent, even when specifically asked by school personnel who the parent is. In the family and/or child's mind, because the relative is acting as the parent, he or she actually *is* the parent.

Child-rearing practices in some immigrant communities may seem severe as compared to commonly accepted practices in the United States. Some parents may scold or punish their children in a harsh manner, sometimes using a belt or strap.

As in the general population, sex education and AIDS prevention are met with varying degrees of acceptance in different immigrant communities. For example, some parents will not allow their children to participate in classroom sex education classes and may even go so far as to remove their child from the school. Birth control may be prohibited and not even discussed. For others, sex education in the schools, though not a major concern, may be considered confusing and inappropriate, and, as in their country of origin, expected to be taught indirectly through science or physical education.

For some immigrant/refugee families, the softening of gender roles typically experienced in the United States creates high levels of stress, frustration, and anger. Whereas in the country of origin, husbands may have been the essential breadwinners and wives typically adhered to a domestic role, in the United States, with both partners working for economic reasons, a dislocation of roles occurs.

In summary, school personnel must be sensitive to the customs, health beliefs and practices, and family roles of newcomers. Workshops on these topics provided by local schools can help fos-



ter and encourage understanding of the potential health issues of children and their families from different cultures.

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RESOURCES

Office of Refugee and Immigrant Health
Bureau of Family and Community Health
Massachusetts Department of Public Health
150 Tremont Street, 4th Floor
Boston, MA 02111
(617) 727-3372

Office for Refugees and Immigrants
2 Boylston Street
Boston, MA 02116
(617) 727-7888

For more information about community-based organizations that work with refugees and immigrants, contact the following two departments:

REFUGEE AND IMMIGRANT HEALTH CARE



Refugee Assistance Program
Massachusetts Department of Mental Health
25 Staniford Street
Boston, MA 02114
(617) 727-5500, ext. 124

Massachusetts Refugee Health Program
Department of Public Health
305 South Street
Jamaica Plain, MA 02130
(617) 522-3700, ext. 461



EXHIBIT 16-1

Bosnians An Overview

Until February 1992, when the country declared independence, Bosnia and Hercegovina (hereinafter referred to as Bosnia) was part of Yugoslavia with an area almost two and a half times that of Massachusetts. The United States recognized Bosnia as an independent republic on April 7, 1992. The Bosnia declaration of independence led to the outbreak of the current war. Before the war, Bosnia's population was about 44 percent Muslim, 31 percent Serbian, and 17 percent Croatian. The remaining population consisted of small numbers of other ethnic groups. Bosnian Muslims, who make up the Bosnian refugee flow coming to the U.S., are descendants of both Serbian and Croat Slavs who converted after the 16th century Ottoman conquest of Bosnia. They tend not to be strongly religious Muslims.

Large numbers of refugees fleeing Bosnia are Muslims, and they are the refugees that have been resettled in the U.S. Most Muslim refugees have tended to be more urban than their Christian counterparts. The total number of Bosnian refugees resettled in the U.S. through September 1993 was less than 1,900.

1994 Estimated Population:

- State Total: Since modern Bosnia has only been independent for the past two years, it is difficult to determine the number of people from Bosnia that are here now. From 1986 through September 1991, there were 143 Yugoslavs who resettled in Massachusetts, two of whom were refugees. About 90 Bosnian refugees from the current conflict have resettled in Massachusetts; many are family reunifications. It is estimated that there are approximately 200 Bosnian Muslims in Massachusetts.



Country of Origin:

- Bosnia is the only republic of former Yugoslavia established on a geographical/historical basis rather than on an ethnic one. Virtually landlocked, it is bordered by Croatia, Serbia and Montenegro. Education was free and compulsory through grade eight. Secondary and university education were available, with at least two years of vocational school being the minimum. The literacy rate was 90 percent. Women were guaranteed full equality and entry into the work force. In practice, this meant that women held full-time jobs in the workplace and at home.

Refugees and Immigrants in Massachusetts Fact Sheet

Massachusetts Department of Public Health, Office of Refugee and Immigrant Health, Refugee Health Program
Massachusetts Department of Mental Health, Office of Multi-Cultural Services/Refugee Assistance Program

Migration Trends:

- Most of the refugees from Bosnia remain in Europe with large numbers in Croatia and Serbia/Macedonia. In addition, there are many Bosnian Displaced Persons, uprooted but remaining within Bosnia. It is not expected that there will be large numbers of refugees from Bosnia coming to the U.S., but there may well be a steady flow of immigrants choosing to leave the devastation or to reunite with family that did resettle in the U.S.

Geographic Locations:

- Most of the new arrivals, many of them family reunifications, are living in Arlington, Brighton/Allston, Brookline, Cambridge, Charlestown, Chelsea, East Boston, Everett, and Malden. Brighton/Allston and Chelsea each are home to about 20 to 25 percent of the recent arrivals.

Demographics:

- New arrivals are mostly Muslims.
- Most come from urban centers, are literate and many are professionals.

Languages(s) Spoken:

- Serbo-Croatian, although since the war, most refugees will state that they speak Bosnian. Many speak German and some speak fair to good English.

Health Notes:

- The Yugoslavian health system was quite modern with one doctor per 624 persons. Immunization for children was more or less compulsory.

References:

Aldrich, J., International Institute of Boston.

"Croatia's Crucible: Providing Asylum for Refugees from Bosnia and Hercegovina", U.S. Committee for Refugees, October 1992.

"The Bosnians: An Introduction to their History and Culture", Center for Applied Linguistics, March 1993.

"The Yugoslav Conflict", by Anthony Borden, Issue Brief: Center for War, Peace, and the News Media, London, England, 1992.

"Yugoslavia Torn Asunder: Lessons for Protecting Refugees from Civil War", U.S. Committee for Refugees, February 1992.

May 1994

Refugees and Immigrants in Massachusetts Fact Sheet

Massachusetts Department of Public Health, Office of Refugee and Immigrant Health, Refugee Health Program
Massachusetts Department of Mental Health, Office of Multi-Cultural Services/Refugee Assistance Program

Central Americans

An Overview

1994 Estimated Population:

- State Total 75,000 to 80,000

This may be an underestimate because a significant proportion of Central Americans do not have documented immigration status.

Countries of Origin:

- Primarily El Salvador, Guatemala, and an increasing number from Honduras.



Migration Trends:

- Since 1979, there had been a rapid increase in Central American migration to the U.S. This increase is due to the on-going civil unrest in several Central American countries, particularly in El Salvador. More recently, there has been a leveling off of migration to Massachusetts.

Geographic Locations:

- Most Central Americans are living in the East Boston, Jamaica Plain and Allston-Brighton areas of Boston and in Cambridge, Chelsea and Somerville. However, there is also a growing population of Central Americans in Holyoke, Springfield, Lawrence, Lynn and Brockton.

Demographics:

- The Central American population in the Commonwealth is primarily young adults with somewhat more males than females.
- Recently, increasing numbers of women have immigrated. There are also increasing numbers of American-born citizen children.

- Many come from rural areas in their native countries with limited educational opportunities and transferable job skills. A sizeable percentage of refugees are not literate in Spanish.

Language(s) Spoken:

- Spanish and Indian languages (there are 21 dialects in Guatemala as well as Indian languages spoken in El Salvador).

Health Needs:

- There is a major need among Central Americans to access appropriate health services and information in Massachusetts.
- There is a high incidence of diabetes mellitus among Central Americans.
- A large percentage of refugees from Guatemala and El Salvador have risk factors for cardiovascular disease.
- As a result of the physical and psychological stress that Central Americans endured during their escape from their native countries, and the lack of adequate medical care in their home countries, many suffered from malnutrition, lack of prenatal care, parasitic infections, and tuberculosis. Many arrive without adequate immunizations.
- Although only a small number of Central Americans have active tuberculosis (TB), many have TB infection. Consequently, under the stresses associated with being immigrants, they are at increased risk for development of active TB.
- Traumatic pasts, separation from families, stresses of acculturation, lack of traditional supports and the easy availability of both drugs and alcohol in this country, have contributed to the development of alcohol and drug abuse among Central Americans, especially adolescent and young adult men.

Mental Health Needs:

- Many Central Americans seek out Mental Health services with a wide variety of symptoms, including depression, stress-related disorders such as post-traumatic stress disorders, separation anxiety, sense of isolation, and suicidal behavior.
- Many refugees from some of these countries are victims of torture and have been exposed to murder and destruction from civil wars and other conflicts.

Refugees and Immigrants in Massachusetts Fact Sheet

Massachusetts Department of Public Health, Office of Refugee and Immigrant Health, Refugee Health Program

Massachusetts Department of Mental Health, Office of Multi-Cultural Services/Refugee Assistance Program

Additional Barriers to Health and Mental Health Service:

- Many Central Americans without documented status may avoid public facilities, including hospitals and health centers, due to the fear of being deported.
- The desire for anonymity often precludes utilization of services and benefits available to residents of the Commonwealth.

References:

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Refugee Health Program and Office of Refugee and Immigrant Health, Massachusetts Department of Public Health.

Office of Multi-Cultural Services/Refugee Assistance Program, Massachusetts Department of Mental Health.

May 1994

Refugees and Immigrants in Massachusetts Fact Sheet

*Massachusetts Department of Public Health, Office of Refugee and Immigrant Health, Refugee Health Program
Massachusetts Department of Mental Health, Office of Multi-Cultural Services/Refugee Assistance Program*

Ethiopians

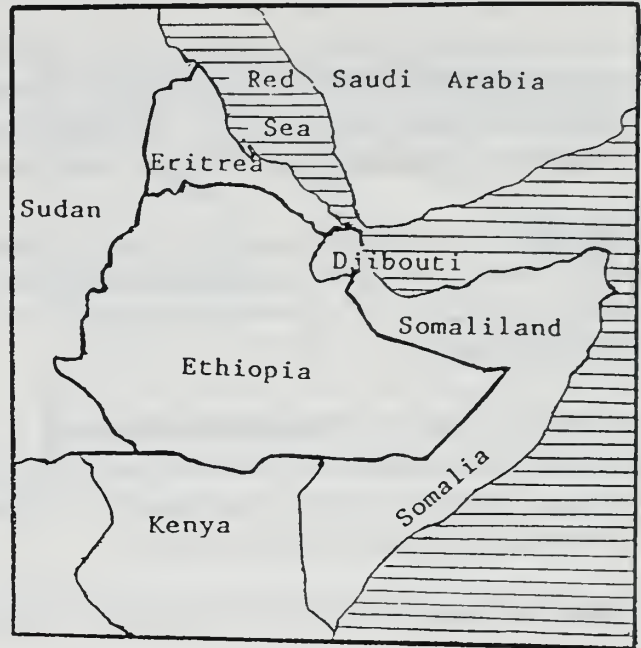
An Overview

1994 Estimated Population:

- Greater Boston area: 6,500 to 7,500

Country of Origin:

- Ethiopia is the largest country in East Africa. Many refugees have come from different provinces of Ethiopia including Eritrea, a province on the Red Sea which declared its independence May 24, 1993.



Migration Trends:

- Resettlement of Ethiopians in the United States began in 1978, with peaks in the number of arrivals from 1980 to the present. Ethiopians began immigrating to the U.S. because of political instability and because of drought and famine in their home country. For the past decade, the number of refugees and immigrants from Ethiopia has increased due to civil war in the country.

Geographic Locations:

- Most Ethiopians reside in Boston, Dorchester, Roxbury, Cambridge, Chelsea, Allston, and Brighton.

Demographics:

- The majority of Ethiopians are males between 19 and 40 years old.

Language(s) Spoken:

- Amharic and Tigrinya.

Health Needs:

- A major health need for Ethiopians in Massachusetts is access to appropriate health services and information.
- As a result of inadequate medical care in Ethiopia, Ethiopians are more likely than the general U.S. population to have tuberculosis infection, intestinal parasites, malaria, anemia, poor nutritional status, and incomplete immunizations. In Massachusetts, cases of active TB among Ethiopians are increasing. Intestinal parasites and anemia are also more prevalent.
- Because many Ethiopians are not used to consulting physicians unless they experience pain, a crisis versus prevention approach to health care is common.

Mental Health Needs:

- Although there is no comprehensive study of mental health status of Ethiopian refugees, it appears that hardships experienced under the government in their native country and stays in refugee camps could have contributed to depression, anxiety, isolation, and other symptoms of post-traumatic stress-related disorders.
- There is a need for information about laws and resources to combat domestic violence.
- As traditional family support systems are weakening, linguistically and culturally appropriate mental health services are needed more than ever before.

References:

Information received from the Ethiopian Community Mutual Assistance Association.

Refugee Health Program and Office of Refugee and Immigrant Health, Massachusetts Department of Public Health.

May 1994

Refugees and Immigrants in Massachusetts Fact Sheet

Massachusetts Department of Public Health, Office of Refugee and Immigrant Health, Refugee Health Program

Massachusetts Department of Mental Health, Office of Multi-Cultural Services/Refugee Assistance Program

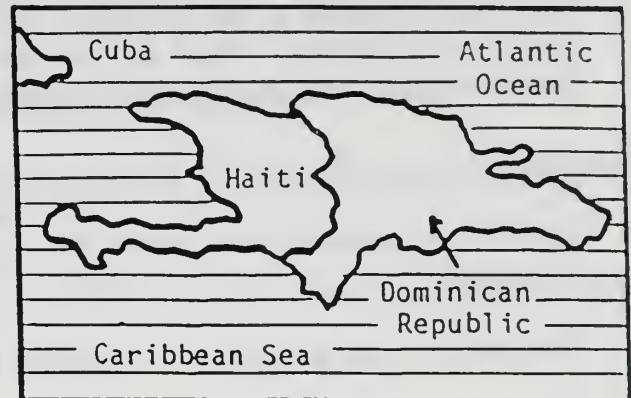
Haitians

An Overview

1994 Estimated Population:

- 21,000 to 26,000 living in the Greater Boston area, and
- 41,000 to 46,000 statewide

These figures may be an underestimation because of the lack of verified information on this population.



Country of Origin:

- Haiti, a country that shares the Caribbean island of Hispanola with the Dominican Republic.

Migration Trends:

- Most Haitians living in Massachusetts have immigrated over the past three decades, with the largest number of arrivals coming in the late 1970s and early 1980s. Massachusetts presently has the third largest Haitian population in the U.S., following Miami and New York City. The first wave of Haitians who migrated to the Boston area were generally from a small, educated and professional elite group that came here to pursue higher education. However, over the past decade, political repression and economic deprivation in Haiti have forced both urbanites and rural dwellers to flee the island. Groups of these migrants have risked their lives in long journeys on high seas to come to the U.S. in search of refuge.
- The September 1991 military coup that ousted Haitian President Jean-Bertrand Aristide forced large numbers of Haitians to flee the country. Until May 1992, the U.S. Coast Guard intercepted these individuals and brought them to the U.S. naval base in Guantanamo Bay, Cuba, for initial screening (the process of reviewing whether they are eligible for parole into the U.S. to apply for political asylum). Since May 1992, first under President Bush and continuing under President Clinton, the U.S. Government has implemented an interdiction policy, whereby the U.S. Coast Guard intercepts fleeing Haitians and returns them directly to Haiti without screening them for possible refugee status. The U.S. Embassy in Port-au-Prince has stepped up its in-country refugee processing.

Refugees and Immigrants in Massachusetts Fact Sheet

Massachusetts Department of Public Health, Office of Refugee and Immigrant Health, Refugee Health Program
Massachusetts Department of Mental Health, Office of Multi-Cultural Services/Refugee Assistance Program

Approximately 270 of the Haitians who have been paroled into the U.S from Guantanamo Bay since the coup have resettled in Massachusetts. They are going through the asylum application process. As a result of the in-country refugee processing, it is anticipated that 50 to 60 additional Haitian refugees will resettle in Massachusetts by the end of 1994.

Geographic Locations:

- Most Haitians reside in the Dorchester, Mattapan, and Roxbury sections of Boston and Central Square of Cambridge. There are also growing numbers of Haitians in Waltham, Medford, Brockton, Hyde Park, Jamaica Plain, Allston, Randolph, Watertown, and Worcester.

Demographics:

- The Haitian population in Massachusetts is composed of mostly young adults with more females than males.
- There are increasing numbers of American-born citizen children.
- According to the 1989 Refugee Mental Health Needs Assessment, the English proficiency level among its Haitian clients is low with only two percent speaking English "very well".

Language(s) Spoken:

- French
- Haitian Creole

Health Needs:

- A major health need for Haitians in Massachusetts is access to appropriate health services and information.
- There is a paucity of information on Haitian health practices and needs in Massachusetts, particularly because of their recent arrival and undocumented status.
- As a result of inadequate medical care in Haiti, Haitians are more likely than the general U.S. population to have tuberculosis, poor nutritional status, incomplete immunizations, and parasitic infections. The differences in the U.S. health care system and the availability of services lead to an under-utilization of care.
- Because many Haitians do not consult physicians unless they experience pain, a crisis versus prevention approach to health care is common.

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*Massachusetts Department of Public Health, Office of Refugee and Immigrant Health, Refugee Health Program
Massachusetts Department of Mental Health, Office of Multi-Cultural Services/Refugee Assistance Program*

- Interviews with physicians in New York City who treat Haitians identified the following chronic diseases as most prevalent: diabetes, hypertension, stomach ulcers and arthritis.

Mental Health Needs:

- The 1989 Refugee Mental Health Needs Assessment, conducted by the Massachusetts Department of Mental Health, found that Haitians suffered severe anxiety (55%) and suicidal feelings (40%) more often than any other refugee groups.

Additional Barriers to Seeking Health and Mental Health Services:

- Many Haitians without documented status may avoid public facilities, including hospitals and health centers, due to the fear of being deported.
- Many Haitians have long working hours which leave them with little time to seek medical help.

References:

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- Refugee Assistance Program, Massachusetts Department of Mental Health.

May 1994

Refugees and Immigrants in Massachusetts Fact Sheet

Massachusetts Department of Public Health, Office of Refugee and Immigrant Health, Refugee Health Program
Massachusetts Department of Mental Health, Office of Multi-Cultural Services/Refugee Assistance Program

Portuguese Speakers

An Overview

1994 Estimated Population:

- 800,000 statewide (based on mid-1980s data) including 150,000 Brazilians.
- Portuguese-speaking populations make up about 14 percent of the state's overall population.

Countries of Origin:

- Brazil, continental Portugal and the Azores, the islands of Madeira, Cape Verde and Guinea-Bissau, Angola, and Mozambique.

Migration Trends:

- Most recently, Brazilians have been arriving in substantial numbers primarily due to the poverty and lack of economic opportunity in their homeland. Previously, the largest Portuguese-speaking groups came from Portugal and the Azores and are now well into the second and third generations in Massachusetts. The Cape Verdean population remains constant in terms of migration to and from their country.

Geographic Locations:

- Most Portuguese speakers can be found in Boston, Cambridge, Somerville, Fall River, and New Bedford with the influx of Brazilians concentrated in the Boston area and Central Massachusetts (Framingham, Marlborough and Hudson). The more settled population from Portugal and the Azores can be found in the Fall River, New Bedford, and Taunton vicinities; significant numbers of Cape Verdeans are located in the Boston, Brockton, and Cape Cod areas.

Demographics:

- New arrivals tend to be low-income individuals.
- Brazilian immigrants tend to be younger adults.
- The Portuguese and Azorean populations are older adults.

Language(s) Spoken:

- Portuguese
- Cape Verdeans also speak a Cape Verdean Creole, but some use Portuguese as their native language.

References:

Personal communication with Somerville Portuguese American League.

"Homeland troubles bring Brazilian influx to region", Boston Globe, February 3, 1992.

May 1994

Somalis

An Overview

There is no official data available on the Somali refugee population in Massachusetts. A Somali Mutual Assistance Association (MAA), the Somali Families MAA, Inc., has recently been established to serve the Somali community. A rough estimate of the size of this community places the number of **refugees** at about two hundred, and **immigrants** at about four to five hundred.

Estimated Population:

- 700-1000 in the State of Massachusetts, with 700-800 living in the Greater Boston area.

Country of Origin:

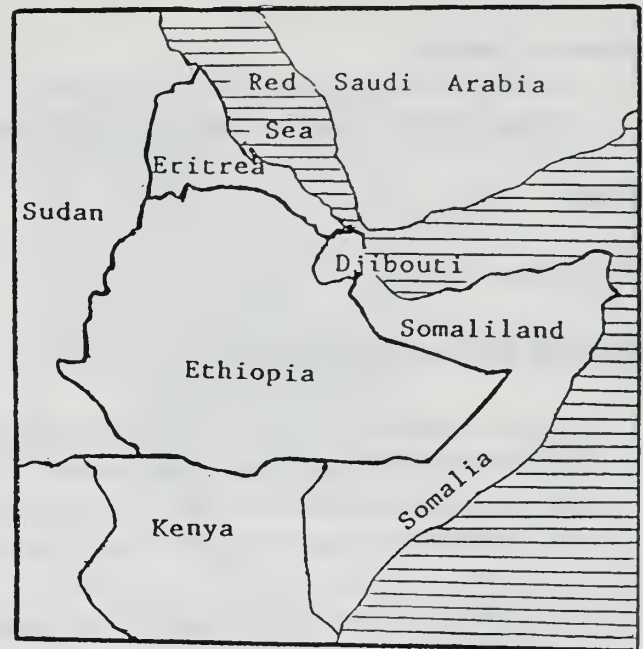
- Somalia is on the Horn of East Africa. Most of the Somali refugees come from the south and central region of the country, but some are also from the north (which recently became the self-proclaimed Republic of Somaliland).

Immigration Trends:

- Somalis began immigrating to the United States in the early 1980s because of political instability, drought, and famine in their home country. For the past three years, the numbers of refugees and immigrants from Somalia have increased because of the civil war which is still raging.
- Prior to their arrival in the United States, many Somali refugees spend a lengthy period of time in the refugee camps in Kenya, Ethiopia, and Djibouti. Living conditions and medical care in these camps are poor.

Geographic Locations:

- Most Somalis who have immigrated to Massachusetts live in the Greater Boston area in and around Cambridge, Somerville, Allston and Roxbury.



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Massachusetts Department of Public Health, Office of Refugee and Immigrant Health, Refugee Health Program
Massachusetts Department of Mental Health, Office of Multi-Cultural Services/Refugee Assistance Program

Demographics:

- The majority of Somali refugees in Massachusetts are young women between the ages of 10-38. This reflects the overall demographics of the Somali population in the United States as a whole.

Languages Spoken:

- Somali, English, Arabic, Italian, and Swahili.

Religion:

- Muslim (Sunni).

Health and Mental Health Needs:

- Almost all Somali refugees need medical attention. The majority do not seek health services because of cultural and language barriers. There is also a lack of knowledge about the health care system and health benefits in the United States. Somali refugees and immigrants need more information and education about health care and services.
- The Somali refugee and immigrant population has an alarming rate of tuberculosis infection. There are also cases of intestinal parasites, malaria, anemia, malnutrition and problems associated with old gunshot wounds. Many Somalis may also have mental health problems due to war-related trauma, including anxiety, depression, and post-traumatic stress disorder.

References:

International Rescue Committee
Somali Mutual Assistance Association

May 1994

Southeast Asians

An Overview

1994 Estimated Population:

- **State Total** **64,400**
- 40% Cambodian 26,000
- 50% Vietnamese 32,000
- 10% Laotian 6,400

During 1991, the predominant new arrival population was Vietnamese. This has resulted in the resident Vietnamese population being the largest Southeast Asian subgroup in Massachusetts.

Countries of Origin:

- Cambodia, Vietnam, and Laos

Migration Trends:

- Resettlement of Southeast Asian refugees in the United States began in 1975, with peaks in the number of arrivals in 1975 and 1979-1981. The first wave were mostly South Vietnamese evacuated in April 1975. The second wave (1979-1981) were more heterogenous in nationality and ethnicity, including Cambodians fleeing the Khmer Rouge, Lao, Hmong, Vietnamese, and ethnic Chinese.
- Since 1987, when the Congress passed the Amerasian Homecoming Act, there has been an increase in the number of Vietnamese Amerasian arrivals. Springfield and Boston are designated resettlement "cluster sites". The majority of Amerasians arrive with their mothers and other family members, but some arrive as unaccompanied minors.



Geographic Locations:

- Southeast Asians have settled in all regions of Massachusetts. The primary locations are listed below:

Refugees and Immigrants in Massachusetts Fact Sheet

Massachusetts Department of Public Health, Office of Refugee and Immigrant Health, Refugee Health Program
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- **Cambodian communities:** Chelsea, Revere, Lynn, Lowell, Lawrence, Attleboro/Fall River, Fitchburg, Holden, Hudson, Leominster, Shrewsbury, Worcester, Springfield, Amherst/Northampton, and Boston (Allston-Brighton, East Boston).
- **Vietnamese communities:** Boston (Dorchester, Brighton, East Boston), Chelsea, Somerville, Quincy, Lowell, Lawrence, Methuen, Brockton, Fitchburg, Holden, Hudson, Leominster, Worcester, Springfield, and Amherst/Northampton. Amerasians in Springfield and Boston.
- **Laotian communities:** Ethnic Lao in Boston, Lynn, Lowell, Brockton, Fitchburg/Leominster, Holden, Hudson, Shrewsbury, Southbridge, and Worcester; Hmong in Brighton, Fitchburg/Leominster and Brockton; and Kmhmu in Boston, Lynn, and Southbridge.

Demographics:

- About 55 percent are males and 45 percent are females, with more males in the Vietnamese community and larger numbers of widows heading households in the Cambodian community.
- The Southeast Asian population is young with 50 percent under the age of 18, 15 percent under age six, and only 5 percent over age 65.
- Within the Vietnamese community, there are two subgroups--Amerasians and political detainees--who are arriving in significant numbers due to specific federal legislation. Amerasians are now 19-30 years old. They had limited opportunity and faced frequent discrimination in Vietnam. According to a Boston survey, 85 percent of Amerasian respondents had less than six years of education, 32 percent had less than three years.
- Many Southeast Asians come from rural areas in their native country with limited educational opportunities and skills training.
- According to the 1989 Refugee Mental Health Needs Assessment, English proficiency levels among Southeast Asians are low: only 15.5 percent of Vietnamese clients, and 5.3 percent of Cambodian clients speak English "very well".

Language(s) Spoken:

- Khmer (Cambodian), Vietnamese, Hmong, Kmhmu, Lao, and Chinese (Cantonese and Chiuchao).

Food and Nutrition

- The traditional diet consists primarily of rice (long grain white rice for Vietnamese and Cambodians; glutinous rice for Laotians), fish, small amount of meat (chicken and pork), and fresh vegetables.
- Common beverages are tea, coffee, soft drinks, and fruit juices.

- Fruit is usually eaten as a snack.
- Milk is consumed infrequently because it is disliked and because many Southeast Asians are intolerant of lactose, the sugar in milk. Sweetened condensed milk with coffee is popular with the Vietnamese.
- The diet may be high in sodium because preserved foods and salty condiments, including fish sauce (Vietnamese) and soy sauce, are common.
- Saturated fat intake may be high because the skin on poultry and fat on meats are usually eaten. Coconut milk is often used in beverages or in cooking.
- Most Southeast Asians try to maintain their traditional diet of rice, fish, and vegetables. However, the process of acculturation have resulted in some changes. Women who are employed do not have the necessary time to cook, and children have developed a taste for Western foods. There is an increased consumption of milk and beef. The intake of sugar in the form of soft drinks, pastries, and ice cream have also increased.
- Traditional spices and ingredients are usually available in Chinese food stores in Boston's Chinatown and cities like Lowell and Worcester.
- Food preferences and taboos are commonly practiced during illness. Cambodians, for example, avoid beef, chicken, bamboo shoots, and eggplant when they have a skin disease. Laotians require that a new mother avoid soup and spicy foods. Vietnamese who are sick eat rice gruels sweetened with sugar or a dish made with salted pork and fish sauce.

Health Needs:

- There is a major need among Southeast Asians to access appropriate health services and information in Massachusetts.
- Certain communicable diseases are more common in Southeast Asia than in the U.S., and people arriving from this area are at increased risk for infection and disease. These include:
- **Tuberculosis** - Southeast Asians are less than one percent the Massachusetts population but accounted for over 10 percent of all new TB cases in 1993.
- **Hepatitis B** - Approximately 12 percent of Southeast Asians are infected with hepatitis B virus. Viral infection can lead to liver cancer, cirrhosis, and premature death. Ninety percent of infants infected at birth become carriers of the virus.

- **Parasitic infections** - Untreated parasitic infections can lead to failure to thrive, anemia, and in the case of some infections, gallbladder disease or death.
- Newly arrived refugees from Southeast Asia, including Amerasians and political detainees in Vietnam, who have lived under generally very poor conditions and had little access to health services, are considered to be at increased risk for many health problems, including those noted above.
- Traumatic pasts, separation from families, stresses of acculturation, lack of traditional supports and the easy availability of both drugs and alcohol in this country have contributed to the development of alcohol and drug abuse among Southeast Asians. While rates of substance abuse are thought to be no higher than for general US population, presently, there are NO substance abuse treatment services for Southeast Asians who do not speak English fluently.
- Southeast Asians are a young population; there is an increased need for maternal and child health services. Currently, adequate prenatal care for Cambodians is the poorest of any ethnic group in the state.

Mental Health Needs:

- Southeast Asian refugees experience a disproportionate amount of severe psychological trauma as a result of their experience with war and political repression. In a 1989 Refugee Mental Health Needs Assessment conducted by the Massachusetts Department of Mental Health, 60 percent of Cambodian and 48 percent of Vietnamese respondents reported being robbed, raped, or tortured during their escape from their native country. Ninety-five percent of Cambodians reported having suffered the loss of family members/relatives in an unnatural manner.
- In a California Department of Mental Health Study, "severe" mental health service needs were identified as FOUR times greater among Southeast Asian refugees. About 15 percent of the Southeast Asians had symptoms of severe mental health problems, compared to 3 percent of the general population.
- Almost 83 percent of Cambodian refugees in the 1989 Massachusetts study reported feeling depressed, with more than half experiencing sleep and eating disorders and severe anxiety.
- Sleep and eating disorders were also reported by 75 percent of Vietnamese refugees in the Massachusetts study. Moreover, almost 60 percent reported they were not able to access appropriate mental health services for help.
- The 1989 Refugee Mental Health Needs Assessment also identified Vietnamese veterans, especially those who are political detainees, and Amerasians as being more at risk for developing mental health problems than the general Vietnamese population (58 percent and 85 percent respectively).

Refugees and Immigrants in Massachusetts Fact Sheet

*Massachusetts Department of Public Health, Office of Refugee and Immigrant Health, Refugee Health Program
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- Due to life circumstances, many Amerasians have low self-esteem and limited education. Only one in 100 will ever be reunited with his or her father. Mothers of Amerasians are often in need of support services.
- After the fall of Saigon in Vietnam, political detainees suffered many years of physical and mental tortures in the re-education camps, separation from families, loss of legal status to hold jobs or to own property, and malnutrition. Despite their desires to rebuild their lives, regain their self-esteem, and for some, reunite with their families, the wide variety of stresses they have experienced over time had made transition and adjustment of life in the United States difficult.
- Domestic violence is a growing problem in Southeast Asian communities. The causes are mainly twofold: role reversal in families where many men can no longer fulfill the traditional requirements of the husbands' and fathers' role, and the loss of the extended family support system in which conflicts could be resolved peacefully.

References:

Descriptive Profile and Needs Assessment of Vietnamese People in Massachusetts, Massachusetts Department of Mental Health, February 1989.

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Refugees and Immigrants in Massachusetts Fact Sheet

Massachusetts Department of Public Health, Office of Refugee and Immigrant Health, Refugee Health Program
Massachusetts Department of Mental Health, Office of Multi-Cultural Services/Refugee Assistance Program

Former Soviet Republics/ Commonwealth of Independent States

An Overview

1994 Estimated Population:

- State Total: 21,000+

Country of Origin:

- Former Soviet Republics

Migration Trends:

- Soviet immigration (mainly Russian-speaking Jewish immigrants) began

in 1972 and by late 1979/early 1980, about 700 former Soviets a year were resettling in the Greater Boston area. Between 1982 and 1985, very few former Soviets arrived in Massachusetts. Beginning in 1987, Massachusetts began to see a dramatic increase in the number of former Soviet refugees arriving in the state as travel restrictions were lifted on persons who were persecuted for religious beliefs. Fleeing religious persecution, anti-Semitism and ethnic hostilities, more than 11,000 former Soviets have resettled in Massachusetts since 1992.

Geographic Locations:

- Most of the state's Russian-speaking Jewish population are living in the Greater Boston area. Traditionally resettling in the Allston/Brighton and Brookline areas, growing communities are found in Arlington, Watertown, Lynn, Roslindale, Springfield, Shrewsbury, and Worcester. The Springfield area is a major resettlement area for Evangelical Christians. Since 1988, about 3,000 Evangelical Christians have been resettled in the Greater Springfield metropolitan area.

Demographics:

- The male to female ratio is approximately one to one.



Refugees and Immigrants in Massachusetts Fact Sheet

Massachusetts Department of Public Health, Office of Refugee and Immigrant Health, Refugee Health Program
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- Compared to other refugee groups, the former Soviets as a whole are an older population with approximately 35 percent between 25-44 years old and another 26 percent over age 44. Among the Evangelical Christian refugees, the majority are under 40 years of age, predominately because they have large families with many children.
- There are two distinct groups of former Soviets in Massachusetts: Russian-speaking Jews and Slavic Evangelicals. Russian-speaking Jews are the majority, comprising about 90 percent of the state's former Soviet population.
- Many of the Jewish arrivals are from urban areas in the former Soviet Republics, with the majority highly educated and professionally trained. Among 1991 arrivals, the median age is in the 40-44 age group.
- Slavic Evangelicals are mostly from the rural areas of Ukraine and Siberia. Many have secondary school education with skills training in construction, plumbing, machinery, electrical systems, and commercial driving. The Evangelicals identify themselves as Slavic-speaking and not as Soviets due to religious persecutions they experienced from the former Soviet government.

Language(s) Spoken:

- Russian is the primary language of the Jews from the former Soviet Republics. Yiddish is also spoken to a limited extent, primarily by the elderly.
- Ukrainian and Russian are the primary languages of the Evangelical Christians.

Health Needs:

- There is a serious need among former Soviet citizens to access appropriate health services and information in Massachusetts. These include prenatal care, reproductive care, infant care, nutrition, family planning and geriatric care.
- Overseas medical screenings and initial health assessments of former Soviets arriving in the state have documented the need for follow-up for chronic diseases, including hypertension, cardiovascular disease, gastric intestinal problems, diabetes, cancer, and visual abnormalities. According to the Centers for Disease Control (CDC), the severity of these conditions is greater among Soviets than the general U.S. population because most of the problems have progressed untreated.
- National refugee health assessment data (CDC; 6/88 - 12/89) indicate that the prevalence of hepatitis B is higher among Soviet arrivals; 1.3 percent have tested positive for hepatitis B.
- The incidence of tuberculosis in the former Soviet Republics is five to six times higher than the U.S., suggesting that recent arrivals are at higher risk for infection and active disease.

Mental Health Needs:

- Resettlement is a stressful process. Personal losses connected with resettlement may result in severe depression. In this population, mental health problems are being manifested in increased health complaints, marital and intergenerational problems, often commencing soon after arrival. These problems are increasing as more and more former Soviet refugees are joining family members who are themselves recent arrivals.
- There is a need for information about laws and resources to combat domestic violence.
- As traditional support systems are weakening, linguistically and culturally appropriate mental health services are also needed more than ever before.

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Refugee Health Program, Massachusetts Department of Public Health.

May 1994

Refugees and Immigrants in Massachusetts Fact Sheet

Massachusetts Department of Public Health, Office of Refugee and Immigrant Health, Refugee Health Program
Massachusetts Department of Mental Health, Office of Multi-Cultural Services/Refugee Assistance Program



GENERAL RESOURCES

Massachusetts Department of Public Health

Bureau of Family and Community Health (BFCH)
School Health Unit
Massachusetts Department of Public Health
150 Tremont St. Second Floor
Boston, MA 02111
(617) 727-0941
FAX (617) 727-1579 or (617) 727-7277

Regional Offices of Bureau of Family and Community Health

Greater Boston Region

Massachusetts Department of Public Health
Bureau of Family and Community Health
180 Morton Street Third Floor, Personnel Bldg.
Jamaica Plain, MA 02139
(617) 727-1115
FAX (617) 727-5289

Northeast Region

Massachusetts Department of Public Health
Northeast Regional Health Office
Tewksbury Hospital
Tewksbury, MA 01876
(508) 851-7261, (617) 727-7908
FAX (508) 640-1027
School Health Advisor: Margaret Blum, R.N.C., M.A.

Southeast Region

Massachusetts Department of Public Health
Southeast Regional Office
109 Rhode Island Road
Lakeville, MA 02347
(617) 727-1440 or (508) 947-1231 ext. 589
FAX (617) 727-9296
School Health Advisor: Alice Morrison, R.N., M.S., MPH

Western Region

Massachusetts Department of Public Health
Bureau of Family and Community Health
23 Service Center
Northampton, MA 01060
(413) 586-7525 or 1-800-445-1255 from (413) area code
FAX (413) 784-1037
School Health Advisor: Constance Brown, R.N., M.Ed.

Central Region

Massachusetts Department of Public Health
Bureau of Family and Community Health
180 Beaman Street (Route 140)
West Boylston, MA 01583
(508) 792-7880
FAX (508) 792-7706
School Health Advisor: Joanne Buffington, R.N., M.S.



SECTION IV

Massachusetts Department of Education

Learning Support Services
Massachusetts Department of Education
350 Main Street
Malden, MA
617-388-3300 ext. 408

Regional Primary Prevention Centers

Mass Prevention Center 1
2155 Main Street
Springfield, MA 01104
413-736-0395

Mass Prevention Center 2
76 Pleasant Street
Northampton, MA 01060
413-584-3880

Mass Prevention Center 3
158 Union Avenue
Framingham, MA 01701
508-875-5419

Mass Prevention Center 4
100 Grove Street
Worcester, MA 01605
508-752-8083

Mass Prevention Center 5
488 Essex Street
Lawrence, MA 01840
508-688-2323

Mass Prevention Center 6
27 Congress Street
Salem, MA 01970
508-745-8890

Mass Prevention Center 7
95 Berkeley Street
Boston, MA 02116
617-451-0049

Mass Prevention Center 8
24 Crescent Street, #301
Waltham, MA 02154-4060
617-893-0111

Mass Prevention Center 9
728 Brockton Avenue
PO Box 2127
Abington, MA 02351
617-857-1025

Mass Prevention Center 10
109 Rhode Island Road, Rt 79
Lakeville, MA 02347
508-946-3444



Basic References Recommended For Schools

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Journal of School Health
American School Health Association



SECTION IV

School Health Alert
P.O. Box 28008
San Antonio, TX 78228

The School Nurse
National Association of School Nurses
Scarborough, ME

A monthly newsletter on health services, health education, and safe school environment, highlighting medical research, synopses of journal articles, commentary, and advice.

Network News: Comprehensive School Health Education
Education Development Center, Inc.
55 Chapel St.
Newton, MA 02160
(617) 969-7100

Teen Yellow Pages: A Resource Guide For Teenagers
Youth Involvement Committee
United Way of Massachusetts
617-422-6621

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